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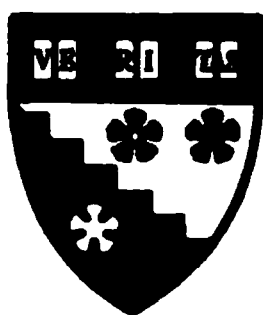
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INDEX.

Apperception, Correlation, Concentration	37	Educational Indiana	54
Answers to State Board Questions.....	61 152	Educative Worth of Biology.....	102
221, 304, 378, 454, 523, 592, 658, 727, 797, 871		English Section.....	104
Annual Address by Nicolas M. Butler..	95	Ethics and History.....	206
Anonymous Criticism of Reading Circle Board.....	146	Examinations in France.....	279
Advice to the Crocus.....	287	Examinations of High School Teachers	587
Allquot Parts in Mental Problems.....	349	English Sparrow, An Essay.....	694
An Old-Time Fairy Tale.....	501	Food for Thought.....	159, 228, 309, 384, 460
An Out-Door Chronicle.....	484	528, 599, 668, 813	
A Good Method.....	564	Form. Atomism, Nature.....	243
A Good Plan.....	564	Factoring by Inspection.....	282
Anniversary Number.....	582	Fall Busy Work—Leaves.....	779
Answering the State Board Questions ..	586	Geography Lesson.....	49
Arbor Day.....	657, 696, 722, 792	Growth	194
Autumn Travelers.....	749, 826	Graduate (The College) as Teacher in the Public School.....	579
A Live School for Live Teachers.....	836	Henry VIII—Analysis.....	18, 113, 188, 257
Apperception in Elementary Work.....	842	Happy New Year.....	52
Book Table.....	78, 239, 321, 400, 538, 610, 675	Henry VIII—History of.....	55
822, 913		Herbatianism Applied.....	109, 332
Books for Teachers' Reading Circle.....	215	High School Section.....	100
Boers and British.....	216	Herbartian Controversies.....	203
Birds' Calendar.....	487	Horace Mann Centennial.....	213
Brooklyn Retirement Fund.....	865	Herbart Movement in Education.....	264
Correlation of Institutions.....	84	Horace Mann.....	368, 520
Correlation as Inter-relation of Subjects	91	Herbart Society	520
Cultivation of Oral Expression.....	101	Harriet Beecher Stowe.....	583
Culture Epochs.....	106	History.....	629
County Superintendents' Meeting.....	233	How to Cultivate the Memory	634
Cultivation of Oral Expression.....	257	How to Begin.....	653
Concentration and Academic Training..	261	History Study in the Fourth and Fifth Grades.....	691
Code of Professional Ethics.....	297	How to Make a Hectograph.....	706
Crusade for Every-Day Honesty and Truthfulness.....	335	Isolation in Education.....	1
Cleveland School System Safe.....	374	Induction and Class-Room Method.....	13
Conscious Correlation.....	403	Institute Problem.....	97, 409
Cube Root—Short Method.....	433	Indiana University.....	163
Complementary Aspects of Education..	508	Indianapolis University	297
Chronological and Logical Method.....	581	Indiana Young People's Reading Circle	585
County Institutes	587, 723	India-Rubber Man.....	705
Child-Study, The Fathers of.....	638	Indianapolis Pedagogical Society.....	792
Criticism by President Joseph.....	653	Legal Title to Annexed School Property	148
Course of Study for City and Town Schools	681	Leland Stanford University	296
Chambered Nautilus, The.....	714, 782	Language	343
Correlation in Ungraded Schools.....	758	Letter from Jena.....	488
Christmas.....	844, 865	Law of Educational Progress.....	475
Christmas Story—A Branch of Holly...	850	Lucy Gray.....	498
Christmas Program.....	860	Letters in Geography.....	639
sk-Work.....	46, 211, 285, 352, 568, 711, 854	Language Work.....	773
aniel Kirkwood.....	170	Legendary Story of the Virgin Mary....	845
vice in Spelling.....	200	Minutes of State Teachers' Association	83
fence of the Teacher.....	249, 548	Means of Testing Educative Work.....	354
ill.....	427, 645	Memorial Day Program.....	362
rawing in the Public Schools...407, 547, 757		Morning Exercises.....	430, 441
Maurier, George.....	791		

Music.....	428	Report on Arithmetic—Detroit Schools.....	
May Reading Examinations.....	496	Science and Education.....	8
Marg. (A Poem.).....	581	Scouting Birds.....	41
Musis in the Common Schools.....	424, 712, 829	Square Measure in First Year.....	47
Methods in Teaching Reading.....	628	Solutions.....	69
Morris, William.....	778	Scientific Temperance.....	125, 371
Methods.....	622	Seat Work.....	193
New Education, The.....	187	School Enumeration.....	214, 447
Northern Indiana Teachers' Asso.....	373, 396	Spelling.....	272, 425
National Educational Asso.....	374, 446, 584	Supplements in Reading.....	273
Northern Lake Boundary.....	556	Supplementary Primary Reading.....	288
Northern Indiana Normal School.....	673	Secret, The.....	287
Number.....	643	School Systems in Large Cities.....	299
New (The) Against the Old.....	735	Southern Indiana Teachers' Asso.....	374, 394
Noise.....	772	Spirit of Investigation.....	347
Our District Schools.....	2	Study of Birds by Outlines.....	417
Opening Exercises.....	50, 430, 441	Subtraction—A Method in.....	566
One Woman's Way.....	306	Shakespeare Books.....	699
Outline of Teaching Process.....	25	School Legislation.....	791
Observations as a Substitute.....	570	Saint Christopher.....	847
Personal.....	78, 168, 237, 318, 398, 470, 535, 606, 671, 743, 818, 911	Science Lesson.....	853
Phonic Exercise.....	197	The Aim Once More.....	39
Psychology in the High School.....	194	Transfers for School Purposes.....	73, 147
Program of Northern Indiana Teachers' Association.....	221	Thoughts Suggested by the Term Apperception.....	184
Primary Reading.....	260	Treasurer's Report of State Asso.....	232
Pedagogy of X.....	328	The Tempest, Analysis.....	338, 413, 491, 552, 613
Problems in Morals.....	415	Tobacco.....	372
Poplar Tree, The.....	424	Truthfulness by Example.....	514
Put Down 8 and Carry 1.....	428	Township Institute Work.....	519
Pedagogical Books and Emerson's Circles.....	435	Teachers' Reading Circle Books.....	519
Politician and Public Schools.....	516	Teachers' Reading Circle.....	586
Progress in History Teaching.....	632	The Fathers of Child-Study.....	638
Psychology via Dora and Dan.....	646	The Teacherly Life.....	651
Purpose of Primary Geography.....	701	The New Teacher.....	653
Patriotic Day Program.....	717	Township Institute Outlines.....	662, 731, 803, 878
Pun, Paradox and Pedagogy.....	780	Tippecanoe Monument Fund.....	740
Physical Deterioration Resulting from School Life.....	767	Thanksgiving Day Program.....	785
Program of State Teachers' Asso.....	900	Two Concepts of the Concept.....	856
Questions by State Board.....	57, 149, 217, 301, 375, 451, 520, 589, 655, 724, 793, 868	Town and City Superintendents' Meeting—Report.....	907
Queries.....	72, 230, 312, 530	Uniform Course of Study for City Schools.....	26, 121, 267, 322, 600
Report of Legislative Committee.....	90	Use of Commentaries.....	
Report on Reading Circles.....	94	Visiting Schools.....	
Rules for Spelling.....	127	Venezuelan Question.....	
Raising Birds.....	134	Vacation.....	
Reading Circle Book.....	296	Vacation Schools.....	
Robin's Red Breast.....	348	Value of Types as E.....	
Results of the Year's Work.....	499	Visit to an Indian.....	
Rousseau's Educational Ideas, Comments.....	540	Washington D.....	
Reviews.....	653	Writing in P.....	
Reduction of School Tax.....	722	Witness of.....	
Report of Commissioner of Education..	722	With the.....	
		Who is.....	
		When.....	
		Year.....	

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ISOLATION IN EDUCATION.

HOWARD SANDISON, STATE NORMAL SCHOOL.

In a literal sense, the word symbolic signifies thrown together. It is understood to mean a pledge or sign by which one may know or infer something in addition to it. The olive branch may be spoken of as a symbol of peace; the lamb, of meekness; and the lion, of courage. In Othello, Act II, the term is used as follows: "All seals and symbols of redeemed sin." Calvin in speaking of Ezekiel, employs the word symbol in the sense indicated: "The vision (in Ezekiel, IX) is a sign or symbol of the presence of God." In the Harvest Moon, Longfellow employs the term in a like manner:

"All things are symbols: the external shows
Of nature have their image in the mind,
As flowers and fruits and falling leaves."

It is seen that the word symbol indicates some finite thing, such as a lion; and that this finite thing signifies another thing, such as a given age. In symbolism a finite thing may be made to signify a finite thing. The idea of symbol includes that of personification; it is not, however, identical with personification. Personification expresses some time in the form of a finite thing, as the spirit of a given age. It sometimes signifies a more fundamental idea; in every case it signifies some partic-

ular, some finite form, this need not portray a thing which is finite; it may suggest an infinite something. The deeper meaning of symbol is that of a particular object hinting something that is illimitable. This more fundamental sense of the term symbol is very finely put by Denton J. Snider, in his commentary on the *Inferno*. In Canto XIV, occurs the following:

"Within the mount, upright
An ancient form there stands and huge, that turns
His shoulders towards Damiata, and at Rome
As in his mirror looks. Of finest gold
His head is shaped, pure silver are the breast
And arms; thence to the middle is of brass.
And downward all beneath well-tempered steel,
Save the right foot of potter's clay, on which
Than on the other more erect he stands.
Each part except the gold, is rent throughout;
And from the fissure tears distill, which join,
And penetrate to that cave. They in their course
Thus far precipitated down the rock
Form Acheron, and Styx, and Phlegethon;" etc.

This passage may serve to illustrate the difference between the fundamental form of symbolism, and the more finite forms—such as personification and allegory. Personification is shown, in that time in its movement, is imaged by the figure standing with its back to the east looking into Rome as its mirror. Allegory is shown in the representation of the different ages of man by the different metals. In a deeper sense, however, the whole thing is a symbol. The image through violence is broken. The fissures distill tears. These tears flow together forming the rivers of the infernal regions. In these rivers are punished the very person whose violence created the fissures in the image. Thus the image is a symbol, because it reveals the activity in its entirety. It is a sign of man creating his own environment. It portrays the total event. This is the most universal meaning of the term. In the prelude to Goethe's *Faust* this same meaning is indicated in the description of the function of the poet:

"Whence comes his mastery o'er the human breast
Whence o'er the elements his sway,
But from the harmony that, gushing from his soul,
Draws back into his heart the wondrous whole?

'Who deals their course unvaried till it falls,
In rhythmic flow to music's measured tone?
Each solitary note whose genius calls,
To swell the mighty choir in unison?'

This idea of symbolism is brought out in Prof. Dewey's discussion of Intuition, (Psychology, p. 240): "Here every fact is seen as dependent upon and necessitated by its relations to every fact. The aim is to see exemplified in any fact the relations of the whole system." It finds a poetical expression in the following lines of Tennyson:

"Flower in the crannied wall,
I pluck you out of the crannies;
Hold you here, root and all, in my hand,
Little flower—but if I could understand
What you are, root and all, all in all,
I should know what God and man is."

This comprehensive aspect of the idea symbol is beautifully and forcibly expressed in the subjoined quotation: "The earth worm is a fact, yet between the meaning of this fact to the boy who sees in it only bait for fishes and its meaning to Darwin, the difference is incommensurable. And not even to botanist and naturalist do plant and worm tell all their secrets. The fact which is opaque to the ignorant man and translucent to the specialist is transparent only to the thinker who is learning to see 'by wholes,' and who from star and stone, from flower and field has broken a pathway to the Absolute Mind."

It has been thought that Froebel possessed in a marked degree this power to see things by wholes; hence, Miss Susan E. Blow has entitled her commentary on Froebel's "Mother Play," "Symbolic Education" using the term symbolic in the exalted sense above referred to.

A brief analysis of the thought of the first chapter is presented in the following:

The idea of the symbolic is the opposite of isolation. Even in its more superficial meanings it signifies a unity and relation which stands over against the thought of isolation, of atomism. It is therefore a point of high value in a book which, intending to treat of the symbolic in education, introduces the subject with a consideration of the doctrine of atomism—showing its claims and its inadequacy. As in Hamlet,

the work requires its readers to look on this picture and then on that. As just indicated, the first chapter in Miss Blow's work is devoted to the subject of atomism, and to Rosseau as the chief exponent of that doctrine. Belonging to this chapter is an interesting and suggestive feature which pertains likewise to each of the succeeding chapters. This feature is the introduction of an excellent extract, usually poetical, as a mirror of the spirit of the chapter. The extract belonging thus to the first chapter is from *The Excursion*, (Wordsworth.) The central thought of the first chapter seems to be that isolation viewed somewhat superficially may claim certain advantages as a doctrine; but that a more fundamental view reveals its inadequacy. Upon an examination of the extract it is seen to reflect this thought. It thus throws its light over the examination of this chapter:

" 'Let us, then,' I said,
'Leave this unknot republic to the scourge
Of her own passions, and to regions haste
Whose shades have never felt the encroaching ax,
Or soil endured a transfer in the mart
Of dire rapacity.' "

This hints the advantages of isolation. The republic as an example of social combination is represented as a thing controlled and scourged by passions. The axe, which represents the work, the advance of organized society, is spoken of as encroaching. Man, in combination with his fellow man, engaged in the transfer of property is spoken of as possessed by rapacity's dire hand. The intent of the passage seems to be the assertion that Atomism is the true doctrine—that a thing in its isolation shows its true nature.

"There man abides,
Primeval Nature's child. A creature weak
In combination; wherefore else driven back
So far, and of his old inheritance
So easily deprived, but, for that cause,
More dignified and strong in himself,
Whether to act, judge, suffer or enjoy."

This further conveys the thought that the individual, if free from the damaging effects of society, reveals his true nature. Admitting that the savage is weak in combination; that is, in social arts and requirements, the claim is made that on that very account he is more dignified. In other

words, the individual is more complete, more perfect, more efficient, when deprived of the influences of school, church, business and all other phases of activity belonging to a man in organized society. The doctrine is advanced that the work of society weakens the individual in his power of thought, in his ability to act, and in his capacity to suffer or to enjoy. The claim is in effect that each one liveth unto himself and each one dieth unto himself. It is a denial of the doctrine that man's permanent, essential, higher nature is embodied in the institutions of society—a denial that, turning to these he may gaze upon his higher nature, and through their influence transform himself into its likeness.

“True, the intelligence of social art
Hath overpowered his forefathers, and soon
Will sweep the remnant of his line away;
But contemplations, worthier, nobler far
That her destructive enemies, attend
His independence, when along the side
Of Mississippi, or that northern stream
That spreads into successive seas, he walks;
Pleased to perceive his own unshackled life,
And his innate capacities of soul,
There imaged.”

While admitting that the isolated individual does not possess the intelligence of social art, he is represented as able to engage in contemplations more worthy, more noble than one who does possess such intelligence. Organized society is represented as a destructive energy. The solitary man of the forest is spoken of as independent. His life is pictured as unshackled. Having never yet felt the touch of culture, of civilization, he is assumed to be in the full possession of his innate capacities of soul. The argument is, that a child beyond the reach of the training to be gained through a combination in the institutions of civilization, reveals and retains his true nature; and that, brought under such moulding influences he is shackled by artificial restraints.

“Or when, having gained the top
Of some commanding eminence, which yet
Intruder ne'er beheld; he thence surveys
Regions of wood and wide savanna, vast
Expanse of unappropriated earth,
With mind that sheds a light on what he sees;
Free as the sun, and lonely as the sun,
Pouring above his head its radiance down
Upon a living and rejoicing world.”

The eminence of a person when free from society's influence,

is here represented by the eminence in the landscape. One who approaches a thing in its isolation is regarded as an intruder. The broad and liberal views of a mind uncontaminated through society's influence is signified by immense regions of wood and wide savannas. The untutored mind of the savage is here said to be the one which can shed light on everything observed. Such a mind is not only free as the sun, but, like the sun, it is in its true condition, that of loneliness, that of isolation.

"So, westward, toward the unviolated woods
I bent my way; and roaming far and wide,
Failed not to greet the merry mocking-bird."

Again the benefits of isolation are portrayed. Free from society's work the woods are unviolated, and the individual is permitted to roam and wander as caprice directs. Thus does the poem mirror the thought that isolation is the true condition for man's development. This is not, however, the thought of the chapter on Atomism. While presenting the claims which superficial thought advances, for the doctrine of isolation, the other and truer aspect is revealed. It is to be expected, therefore, that the introductory extract will likewise set forth the higher view. This is tersely shown.

"But that pure archetype of human greatness,
I found him not. There in his stead appeared
A creature squalid, vengeful, and impure,
Remorseless, and submissive to no law,
But superstitious fear and abject sloth;"

In the chapter on Atomism there is presented:

1.—The influence of the dominant idea of an age. Such an idea is said to give form—that is essence, content, character, to all the phases of society. In illustration there is given both a hint of the influence of "scientific atomism" upon the government, philosophy, theology and education; and of the doctrine of Evolution upon the examination of all kinds of existences.

2.—The idea of atomism as a doctrine of human nature taken in all of its aspects. Such a doctrine is deemed to possess two elements in its creed. One of these is that man by nature, i. e., in an uncultivated state, is good; the other is the thought that institutions, arts, sciences are essentially bad. In consequence, man should have three permanent

aims. The first of these is to destroy, in so far as possible, the institutions and their work; the second, to isolate himself from man, because the more the men collect together, the more they corrupt one another; the third, to return to the native state in so far as possible, to the state of ignorance, innocence and indigence.

3.—Atomism in its more limited application to education as given in the schools. Under this, two requirements are shown. The first is the isolation of the pupil. This is to be practically accomplished by having every one of the very few who are under dire necessity to be brought into communion with the child entertain the same thoughts, purposes, and emotions as the father, in so far as possible. The second is that the child is to be left entirely free to do as he pleases. He is to receive no intimation that his desires are to be curbed. This second requirement is then exemplified in his ethical, religious, and intellectual training. His instruction in the science of human duties in order to harmonize with the principle of Atomism, must be such as to keep him free from any sense of moral obligation. He must not in any way be made aware of the meaning of such words as obligation, obedience and duty. To feel obligation is to have a sense of one's unity with others. This is inconsistent with the doctrine of Isolation, according to which, each individual is complete in himself. His religious instruction in the effort to be true to Atomism must be so directed as to keep his mind entirely free from all religious ideas during the first twelve or fourteen years. He is not to think of God or his relations to Him. The thought that his soul is a spirit, that God is a spirit, and that the two are of kindred nature, is in no wise to be inculcated, as this would be hostile to the idea of isolation. The whole religious training is to move forward upon the assumption that each soul is a distinct and separate thing in itself; and that as to the essence of God's spirit, one must always remain ignorant.

In the attempt to gain scholarship, the principle of Atomism leads necessarily to three things: The first is the undue emphasis of the value of sensation as a source of knowledge. This results in an over-emphasis of that kind of "object lesson" in which the thing is viewed as isolated. The second

is an under-valuation of the worth of books, and of the ability to master them. According to the doctrine of Atomism the object or event immediately present to the investigator is all that there is of it; hence, no book is used to portray the process through which it became what it is. The third is the attaching of too much importance to delay in education; to passivity; to receptivity in the child. This assumes that there may be an internal development of one's faculties and organs, without providing in a systematic way, materials for that development. Advocates of the doctrine sometimes speak as if the powers of thought, feeling and will, could properly develop, without in any way acting upon environment. With this idea Rousseau urges that the mind should be kept passive; that the aim of the teacher should be to lose time; that the pupil should be trained in the art of being ignorant.

4.—The merit of Rousseau's educational movement. This is shown to be two fold: It consists, in the first place, in such a successful attack upon formalism, that the educational world was led to see the value of dealing with things in themselves, instead of with their signs. It is found, in the second place, in his strong advocacy of the study of the child. The present movement in child-study owes much to Rousseau.

5.—The relations of Froebel to Rousseau and Pestalozzi. In regard to this it is said that Pestalozzi is in harmony with Rousseau upon many points; that he resembles Froebel in many of his educational doctrines; but that the elements of likeness to Rousseau are precisely those wherein he differs from Froebel.

SCIENCE AND EDUCATION.

WM. L. BRYAN, INDIANA UNIVERSITY.

Modern science is, for the most part, outside the public school. I believe that this should not be so.

I am not indeed one of those who believe that science can now or ever fully determine any art or occupation. On the contrary, I believe on principle that no principle, scientific or philosophic, is sufficient to determine a single skillful deed.

Every deed in the school or anywhere is a concrete thing, subject not only to the tangible forces which your method can grasp, but also to the million intangible forces which no statable principle can grasp. The power to take account of these intangible realities, which all men not debauched by learning in some degree possess, we call tact, common sense, gumption, administrative genius. For my part, I believe that these qualities are more important in the school, and in every business, than anything which science or philosophy can add. More than any other one thing, I should like to-day to see a crusade in favor of common sense in the public school. With scientific and philosophic Don Quixotes riding their Rosinantes against innumerable windmills, and sometimes carrying windmills with them, I know of no hope for the children except in that saving salt of common sense which the American people generally show in the long run in all their undertakings. I particularly *rejoice* that we have in so many cities, school men with a genius for the practical administration of affairs. At a time when the ferment of educational *ideas* is everywhere working, it is worth while to remember that there is no sort of man greater than the great Executive. A man who can successfully administer a great school, who can meet rightly everybody who has to be met, from the janitor to the mayor, who can face the whole problem of life, from the price of coal to the co-ordination of studies, and who can bring out of all this, conditions that will suffer the children to live and to grow—that man is a statesman, and all the rest of us should take off our hats in his presence.

In the second place, I do not believe that empirical science makes valueless the philosophical contributions to education. Some of my colleagues do not agree with me in this. There are those who believe that although men have lived in the world some thousands of years, nothing worth while got to be known until here lately. Plato might as well never have lived. Kant is a corrupter of the youth. Hegel is an enemy of human progress, and so following. I cannot agree with this. In general I have found that these critics do not know the philosophies they deride. Their derision is ignorant derision, and their scorn is self-disgrace.

For my part I rejoice in the priceless inspirations of Froebel. I do not doubt that the disciples of Hegel and Herbart have done vastly more than their unintelligent critics realize, to lift educational theory from the plane of capricious debate. I should like to see a genuine revival of any of those greater masters who have taken the raw material of human experience through spiritual fire until it is gold. I am glad also that we have in some cities a philosopher superintendent, provided he is like that one of your number, of whom his friends say that he can fly and also walk. He can fly with the seers and he can keep step with the children.

But there is another influence which I believe should more largely touch the public school. Of the vast social movement commonly called modern science, doubtless because of its relative magnitude in our time, we are all more or less attentive witnesses. It is perhaps too great and too near for adequate definition at present by any one; but something of the outside of its secret is the secret of every one. More of the world and more of man's life get looked at; and everything in both with more refined attention supplemented by more refined devices. The best experiences of the best observers are saved; and these are by degrees brought together, so that there emerge special laws, sciences and then general laws and the promise of science. Through this wide and delicate organizing contact with things, our race has experienced such a rebirth, such an inflow of new truth and such reinforcement or power for growth and for efficiency as that which comes to a tree in the spring. The old core of life was there, had to be there, but it has wakened up to new life of growth and productivity under the thousand touches of the outside world. The old fable of Antaeus has come true. We have touched the earth and it has given us new life. We have touched the earth and it has not degraded us. There are those who think otherwise. "Tell Evenus," said Socrates on the day of his death, "tell Evenus to follow me as soon as possible into the house of death." For, he goes on in substance, as everywhere in the dialogues, it is the business of a wise man to die, to escape from the corruption of the senses, to escape from the degradation of work with the hands, to escape every day of one's life by every means from every sort of

contact with the earth, and by pure reflection to ascend into complete fellowship with the absolute good.

That sounds like gospel. It is gospel. But there is a better gospel. I appeal from these earth-despising prophets to a Prophet who did not despise the earth, who came eating and drinking, who cared for the bodies of men, whose last prayer and whose last command was that his disciples should not desert the world, even to dwell apart in a Mountain of Transfiguration, but should go into the earth where the people are.

There is another band of disciples not less sacred, not less brave. Their mission is not to preach but to see. What are they looking at? The dictionary is too short for an answer. At the earth from skin to core wherever it can be set eyes on—at every living thing and every shred of its body, at every man and every work of man from the playthings of a baby to the pyramids and constitutions and philosophies and to science itself. Nothing is insignificant; an earth worm is studied to as good a purpose as an empire. Nothing is uncommon or unclean; swamp and plague and boil, dark age and savage continent, uncouth dress, grotesque religion, Hotentot, Zulu, child and pedagogue, everything comes into its divine right of being looked at.

I have seen a picture of a room full of monks sitting in elegant leisure hearing the story of a returned missionary. It may be that among those who listened were good men who had faith in God, in the goodness of His world and in the triumph of righteousness. But the haggard story-teller was one who believed that the world has to be *made* good. And so he had gone forth to struggle with publicans and with Pharisees, to have the mother love within him insulted and tortured by those he longed to save, and to lie prostrate in Gethsemane, with every friend fled, and the face of God hidden.

I would have beside this picture another—I would have a roomful of philosophers listening to the story of the scientist. They sit aloft in peace, *declaring* that the world is rational. He also believes that the world is rational; but that is not enough. He must go forth and *see* that it is rational, and how it is so. He must go forth to be tortured by exceptions.

Again and again he must fail "though the granite seeming to see the smile of reason beaming." Again and again he must see the well ordered, schematized reason of the books shattered by pitiless reality—all this in order that there may rise vast and substantial the Reason which is.

I need not say how this whole movement of modern science has affected the world. This movement has without doubt given us an incredible advance toward the millenium. It has helped us to master the brute earth and made us all neighbors and brothers. It has changed the whole spiritual atmosphere, so that there was doubtless not a sermon preached here this week not deeply modified by what a century of science has done.

And still science is for the most part outside the public school. Can it come inside? Not easily. It is not easy for any good thing to get really inside of any institution. You cannot get common sense or philosophy or any sort of science inside the school between the lids of a hand-book. You can not get any of these things entirely and thoroughly inside, from a committee of great outsiders who talk at the school. There are special reasons why it is hard to get science into any kind of art, such as teaching. There are two battle lines in human progress. Some are trying to find out what is true; some are trying to find out what to do. Sometimes they are far apart. What science discovers may have to wait a dozen or a hundred years before it can be turned to practical account. Faraday was long dead before there was commercial electric light; and the discoveries of science must often pass through a long digesting process before they can be school-room wisdom.

Nevertheless, there are those who believe that elementary education and modern science cannot much longer remain as isolated from each other, and as ignorant of each other, as at present. We must short-circuit the connection between the University and the common school. The established *results* of science must get a quicker path from the laboratory into the school, so that the children will not be taught so many things as true which are known to be false, and so that the most certain conditions of physical and mental health will not be ignored. We need to get the *method* of science inside the

school, so far at least that everybody from the kindergarten baby to the educational czar will acquire the habit of not deciding questions without reference to the facts involved. We need to get the *spirit* of science to fill us every one with zeal for work, and infinite patience with the secret of growing along with all that is good in the old into the ever new, with humility because we have seen so little, and with reverence because we have seen so much.

All that I have said in plea for science has been more powerfully said in the person of the distinguished scientist, Professor Joseph Leconte, of the University of California. He has brought us a message not found without infinitely laborious study of minute facts by himself, and other such missionaries of science as he. That message has touched our late-born race to the marrow; and that man stands among us a living proof that one may spend his life in scientific study of the earth, and therewith grow into the spiritual vision of a prophet.

INDUCTION AND CLASS-ROOM METHOD.

CHAS. A. M'MURRY, NORMAL, ILL.

The chapter on *Induction* in the General Method is an attempt to discuss the simple principle upon which instruction is based. It is a treatment of the same mental process that is described in DeGarmo's Essentials of Method. A simple practical work on the *Method of the Recitation* which is based upon the idea of the formal steps as elaborated and applied in Germany, is being worked out and will soon be issued.

In the effort to apply the principles of Herbart to the work of instruction, a plan of recitation has been developed based upon the general principles of inductive and deductive thinking. The problem to be solved is presented in the question, How shall we teach children important topics in different studies? What is the natural and rational process by which a child approaches and masters any given topic in a study? In the effort to solve this problem we are thrown back upon the leading principles which govern mental action (psychology) and upon the logical order and connection of ideas in a given

subject of study. In other words we must keep in mind both the child and the study. If there are general laws in accordance with which a child's mind applies itself to a study, we need to know them in planning a recitation. If the subject of study itself demands a certain logical order we must also recognize this limitation.

First of all let us answer this question, Is there a *form* to instruction? Is there a right way to teach? (All other ways being wrong.) Most teachers naturally resent interference; they object to being put under the control of definite requirements in instruction. They prefer to do as they please and to exercise their own originality and independence. Teachers generally sneer at the notion of a definite method or process of teaching. It is well, however, to notice the broad latitude thus granted for sinning against every principle of right method. Originality in methods of teaching, in a great majority of cases, simply means freedom to do things in the wrong way; to use slipshod, mechanical and old-fashioned, (often irrational) methods. It means the rule of caprice, carelessness and general indifference to the principles of education. It will have to be admitted that even the psychologist and student of education do not agree on some points, but in spite of this, the experience of men in education has already developed some important fundamental principles of teaching which can be understood and applied by every intelligent teacher. The disciples of Herbart in Germany have made a serious effort to organize these principles into a plan of recitation work which has been applied to school room tasks for a number of years.

The five formal steps of instruction constitute such a combination of educational principles which can be applied to the teaching of topics in different studies in different ways. Before entering upon a statement of the principles involved in the formal steps, let us note down a few of the essentials of good recitation work which will be recognized and accepted by nearly all teachers:

- 1.--Self activity on the part of the pupil in seeing, thinking and mastering things for himself.

- 2.—Vigor and intensity of mental effort so as to establish

habits of concentration and of strength, avoiding carelessness, sleepiness and general laxity.

3.—A proper use of a child's previous knowledge as he advances into the new lessons.

4.—All the knowledge acquired by a child should be based upon concrete and real objects of thought.

The history of education since Comenius's time emphasizes, over and over again, the necessity for sense training and the basing of all knowledge upon an experience with real things. There is perpetual danger in all schools of knowledge becoming simply verbal, a pure memory drill.

5.—Thoroughness of knowledge. The knowledge gained by the children in the schools should be thoroughly mastered, and one of the most important things for the teacher to do, in a recitation is to give such tests, reviews and drills as shall bring about a conscious mastery of the principles of a subject and the ability to apply them under a variety of forms.

6.—School children not only need to master the school sciences theoretically and in text-book form, but they should learn how to use knowledge in the practical affairs of life. The school cannot undertake the whole of this duty and yet it must teach children how to use their knowledge; how to bring school information into connection with life, with real experience in the world.

7.—In some studies the children are to learn not so much science as arts, such as reading and writing. They are to form habits in reading and writing, which will be of the utmost value to them in school and in after life.

8.—As children move along through the school grades, they should become conscious more and more of the scientific order and system that prevails in studies. There is a scientific framework in every study. The simple fundamental principles which give unity and connection to the parts of a study, as in grammar or geography, should be seen in their importance. As children advance in their studies, they are capable of a better grasp of knowledge in its scientific form.

9.—Knowledge should be so selected and presented to children that it will awaken a natural and spontaneous interest. There may indeed be many severe tasks and knotty problems

to be worked out, but even these may oftentimes contribute to a growing and deepening interest.

10.—Children should be trained in school to think and reason, to exercise their own judgment, to be independent, self-reliant in thought and deed. Their minds are not so much to be moulded as to be developed in every proper direction.

These are at least a few of the simple requirements which most teachers will agree to. Now, if we can find in the study of psychology, especially of child psychology, and in the school studies themselves a general process which fits the child's natural mode of acquiring knowledge in the different studies, it will greatly help those teachers who are willing to learn.

Now, what are the controlling principles which underlie the process of learning as interpreted by the formal steps?

FIRST.—It is inductive-deductive. The first four steps give a series of approaches to and mastery of a topic inductively. Some one object of thought is carefully examined, analyzed and grasped in its parts and as a whole (first and second steps). It is then compared with other similar or contrasted objects of thought until a group notion, a concept or law is discovered and clearly set up as a general or class notion. (Third and fourth steps.) After this law or general notion has been expressively worked out and formulated the range of its application is tested. (Fifth step.) It is applied in new directions upon new materials. Its place and relationship to other general notions are seen and understood. The deep fundamental value of this inductive-deductive process in learning can best be determined by a study of natural mental processes. There are two or three reasons for thinking that this inductive-deductive thought process is the necessary channel through which mental life pours itself.

FIRST.—It is the unmistakable conviction of thinkers and teachers that children must begin with concrete objects of thought and by a process of observation (analysis and synthesis) comparison and association on the basis of similarity, advance (inductively) to the grasp of class notions (generalizations.) This seems in children to be a natural and even unconscious mental movement.

SECOND.—General notions are the goal of instruction.

They are indeed the ultimate goal. All knowledge must pass up out of the concrete stage into the stage of thought (general notion.) Until it reaches this stage knowledge has no breadth. It cannot see beyond the individual and discover that a single idea runs through the world and compasses a whole multitude of objects. A horse or cow is limited largely to particular notions and remains forever tied to concrete things. A child leaps from the perception and comparison of a few objects to a conception of a common idea underlying the many. The child frees itself from slavery to individual sense perceptions and by the power of thought and imagination puts unity and connection into a whole world of things. In the four steps of the inductive process we are working always toward general notions. We begin with a world of objective things, we observe, classify and work out general notions in a great variety of forms. We have worked away from the concrete to the abstract or general.

THIRD.--But these general notions are for use. We turn them back again upon the world of realities. We discover new and varied applications and extensions. General notions are worthless unless they are applied to life. This is the use of knowledge. This is the application of general truths to the intricate and tangled relations of ordinary life in the world.

FOUR.--The inductive-deductive process of thought is based upon the idea that children do their own thinking and that the teacher cannot do it for them. They must see and compare and draw conclusions and apply the general notions mastered. This whole process is radically based upon the notion of self activity in children.

FIVE.--In the first and second steps, and to a large extent throughout this whole process, the principle of apperception finds a full recognition. Children are to make their way into the fields of knowledge out of the old fields of experience. They must fall back at every advance step upon the old basis of supply. They must keep the old line of retreat open in every emergency so as to be able to fall back upon their reserves. This also means self-activity throughout.

SIX.—The inductive-deductive process, which we have described, is a process of investigation, of discovery. It is not

dogmatic, formal, didactic, but experimental, inventive, inquisitive. It searches out and discovers truth, at least this is the spirit which it seeks to incorporate.

SEVEN.—To what extent is thorough and systematic knowledge attainable in such a method. There are three points in this inductive process where thoroughness of knowledge and systematic drill are necessary; in the second step (clear and full description of the object of thought,) in the fourth step, (clear and accurate statement of the general notion until it is fully mastered,) in the fifth step, (the varied application of a general notion until it is easily recognized under all disguises.) We can only suggest the result of a wise use of the principles involved in the formal steps when applied to instruction in the studies. If these are the true principles of mental action of children, conformity to them in instruction does not mean slavery, but freedom. It is a very low and perverted notion of freedom that means power to do as one pleases. The road to freedom leads through obedience to fundamental laws. All thinkers are agreed upon this proposition. The only question is, what are the laws? To disregard well established laws in teaching, a refusal to obey rational requirements because they limit our freedom to do as we please, is simply to follow a road that leads to blundering and grief. He who refuses instruction and control is simply heaping up difficulties in his own path because he pursues a line of action that constantly violates natural laws.

BRIEF ANALYSIS OF HENRY VIII.

JONATHAN RIGDON, DANVILLE, IND.

In the study of this play, as in any other play of our great author, we should seek significance in every line. Our object should be, not merely to understand this play, but to gain general literary culture. To attain this end we must be awake to beauty in conception and to felicity in expression. We should not only observe the peculiar excellence of the many striking passages, but we should make that excellence our own before we leave those passages. We shall observe that many words of this play are used in significations dif-

ferent from that of present usage. Also, we should note as far as we are able, the principles of literary criticism which our author has exemplified and also those which he has failed to follow, if there be such. In the space allotted to these articles, enough of this can be done to suggest what the nature of the study should be.

PROLOGUE.—In Shakespeare's time, and as late even as the middle of the present century, it was quite common for one of the characters of a play to step before the audience and introduce the play about to be performed. In this introduction, called the prologue, the aim was to give the audience something of an idea of what they might expect and to put them in the proper mental mood for appreciating the same.

"I come no more to make you laugh: things now,
That bear a weighty and a serious brow,
Sad, high, and working, full of state and woe,
Such noble scenes as draw the eye to flow,
We now present."

These, the first lines of our prologue, state very plainly the nature of the drama that is to follow. It's not a comedy. It contains weighty and serious matter pertaining to the state. Then we are told the different classes of persons that may appreciate such a play,—the deeply sympathetic, the truth-seeking, and the show-loving people may all find their respective objects. Who can now enjoy this play?

"Only they
That come to hear a merry, bawdy play,
A noise of targets, or to see a fellow
In a long motley coat guarded with yellow."

Then follows a passage telling us that the play to be presented is founded upon truth, not fiction, quite in accordance with the name of the play, which was, "All is True."

The following passage has pedagogical signification:

"Be sad, as we would make ye: think ye see
The very persons of our history
As they were living "

In this we have given the object of all prologues, of book prefaces, of introductions to orations, and of preliminary remarks of whatever kind, before our schools, our classes, our congregations or our juries. The aim of all such should be to put the minds of those to whom we speak in a sympathetic

spirit of cooperation and to dispel, wherever it exists, the antagonistic spirit of criticism. The reflection contained in the closing lines of the prologue is grounded no less upon Henry VIII, than upon the great drama of life forever being acted.

"Think ye see them great,
And followed with the general throng and sweat
Of thousand friends; then, in a moment, see
How soon this mightiness meets misery."

ACT I.

Scene I.--Opens with a conversation between the Duke of Norfolk and of Buckingham, concerning the meeting of King Henry VIII, of England, and Francis I, of France, upon the "Field of the Cloth of Gold." This meeting in 1520, ostensibly to strengthen the peace between France and England, was really an effort on the part of the two kings to out dazzle each other. It was a most reckless waste of money, and as Buckingham suggests, was all to no purpose; for King Henry VIII, instead of cooperating with Francis, joined his enemy, Charles V., of Spain. Buckingham, who was kept away from the meeting by sickness, listens attentively to the eloquent description of Norfolk, but he soon lets us know that his mind is burning with hatred and envy against his enemy, Wolsey, the director of this splendid exhibition of waste. Buckingham asks:

"Who set the body and the limbs
Of this great sport together, as you guess?"

It is hardly conceivable that he did not know already who did it; he only desired to turn the conversation upon Wolsey. Norfolk answers with most elaborate courtesy:

"All this was order'd by the good discretion
Of the right reverend Cardinal of York"

Norfolk is more polite and therefore wiser than Buckingham, but it is safe to conjecture from this little speech that beneath the very superfluity of its deferential courtesy lurks an irony quite as bitter as the outspoken censure of Buckingham, who says:

"The devil speed him! no man's pie is freed
From his ambitious finger."

Thus, with excellent art, the poet arouses our intensest interest concerning the leading character of the drama with-

out intruding his actual presence upon us before our minds are prepared for his appearance. Norfolk is by no means an admirer of Wolsey, but for this very reason his compliment is all the more valuable when he says of him:

“There’s in him stuff that puts him to these ends;”

For without the aid of ancestry, with only the gift of Heaven, he has secured “a place next to the King.” Here Lord Abergavenny, another enemy of Wolsey’s, declares that his chief gift is from Hell. Buckingham continues his criticism of Wolsey, but at the same time clearly tells us of his wonderful power. By his own authority he appoints the king’s attendants, makes up the file of all the gentry, and by his own letters, independent of the council, brings into the king’s court whom he pleases. Norfolk cautions Buckingham to be more discreet in his condemnation, to “read the cardinal’s malice and his potency together.” Here Wolsey enters but immediately goes out again, and as he does so, exchanges disdainful stares with Buckingham. To bring the action of this scene to its height and to close, Brandon, Duke of Suffolk, with Sergeant-at-arms and guards, enter, and arrest Buckingham upon the charge of high treason. Buckingham almost immediately discovers the cause of his unjust arrest and exclaims:

“The surveyor is false; the o’er great Cardinal
Hath show’d him gold ”

Buckingham, the victim of his own indiscretion, shows true courage in resigning himself to a fate he knows he cannot now escape:

“The will of heaven
Be done in this and in all things.”

Scene II.—In this scene, we are introduced to three new characters, King Henry, Queen Catharine, and Buckingham’s surveyor. The king himself opens the scene by thanking Wolsey for his great care in discovering the conspiracy on the part of Buckingham. He then requests Buckingham’s surveyor to be brought into his presence and relate, point by point, his master’s treasons. But just as the king and his attendants take their seats for the examination of the surveyor, unexpectedly to them as it seems, the queen with her attendants enters. She kneels before the king, saying, “I

am a suitor." In the king's answer to her he manifests a kind of tenderness which is one of his few redeeming characteristics. He tells the queen that she always has half his power and may at will take the other half without the asking. Queen Catharine shows her ever watchful interest in her king's welfare by telling him that her suit is that he will act in accordance with his own honor and the dignity of his office, by repelling the unjust taxes levied upon his subjects by Cardinal Wolsey. The Duke of Norfolk speaks to the same point. The king is surprised as he does not know of any such taxation, and asks Wolsey to explain the matter. Wolsey tries to shift the responsibility upon the council, which he could easily have done if it had not been for the sagacity of Catharine, who told him plainly that he was the very originator of the scheme by which each subject was compelled to pay one-sixth part of his substance, without delay, on pretense of defraying the expenses of wars with France. The king says that the whole matter of taxation is against his pleasure, whereupon Wolsey declares that he had acted only in carrying out the unanimous agreement of the council. But the king directs him to revoke the taxation scheme immediately. Here Wolsey shows not only his quick sagacity, but also his infinite meanness, by directing his secretary to write letters to every shire in England, telling the people that through Wolsey's intercession the king has been induced to revoke the taxation order.

This matter being disposed of, Buckingham's surveyor enters, and Queen Catharine ventures to say to the king—

"I'm sorry that the Duke of Buckingham
Is run in your displeasure."

The king tells her that he too is grieved. He praises the excellent qualities of Buckingham and says that when such a man has once become corrupt his qualities "turn to vicious forms ten times more ugly than ever they were fair." He now calls for Buckingham's surveyor to be brought forth that the queen may hear him relate his charges against his master. Wolsey, fearing that the scoundrel, whom doubtless he has bribed to prefer charges against Buckingham, will break down, says to him—

"Stand forth, and with bold spirit relate what you,
Most like a careful subject, have collected
Out of the Duke of Buckingham."

The charges made by the surveyor were, that it was usual for Buckingham to say, "any day it would infect his speech," that if the king should die without issue, he'd carry it so as to make the scepter his. He further charges Buckingham with threatening "revenge upon the Cardinal." At this point Wolsey attempts to impress upon Queen Catharine how dangerous it would be for such a man as Buckingham to retain his freedom; but the only answer of the most excellent queen was "My learn'd Lord Cardinal, deliver all with charity." In this simple speech of the queen, we not only see the ever present charm of her nature, charity, but we are led to guess that she suspected the learned cardinal of unfairness. The surveyor continues his accusation, telling the king that Buckingham owed the thought of his succeeding to the crown to the suggestion of his confessor, Nicholas Hopkins. The queen interrupted the surveyor, suggesting to him that at the complaint of tenants he lost his office under Buckingham; which fact alone was enough to cause his testimony to be taken, if at all, with very great care. Wolsey's great power over the king had prepared his mind for the very lies the accuser had to tell. He therefore commanded the surveyor to proceed. As the result of the charge, the king in almost a fit of rage called Buckingham to present trial.

Scene III.—Is a brief conversation between Lords Chamberlain and Sands, and Sir Thomas Lovell, in which they all express their pleasure in knowing that French manners, "with all their honorable points of ignorance pertaining thereunto,—as fights and fire works," are to be banished from the English Court and that English customs are to take their place. This is simple enough in itself, but it is a manifestation of the spirit prevalent at this time according to which England was breaking away from the old in government, in religion, even in manners and customs. The scene closes with a reference to the great supper that is about to be given Cardinal Wolsey. Chamberlain, Sands and Lovell all praise the generosity of Wolsey. In the taxation scheme, by which Wolsey was to ring from English subjects one-sixth of their

hard earned substance, Shakespeare sets forth Wolsey's eagerness to get gain. Here we have given another characteristic of his nature, representing him as free to bestow his riches upon others. Both elements of his character are true to history.

Lovell.

"That churchman bears a bounteous mind indeed,
A hand as fruitful as the land that feeds us;
His dews fall everywhere."

These complimentary references to Wolsey have, however a deeper significance in conveying to us this principle of human nature, that open-handed generosity covers from our view a multitude of grosser sins. As a rule we are willing to enjoy a man's liberality without concerning ourselves over-much about how he came by his substance.

Scene IV.—Let us look in upon the festivities of the supper, which is not only a supper but a dance. Here we see the fine ladies and lords of the English Court. "The red wine first must rise in their fair checks." Then modesty will impose no restriction upon their conduct. Wolsey here shows himself to be a great entertainer. Here we first meet Anne Bullen, whose beauty completely captivates the king and makes him exclaim: "the fairest hand I ever touched, O Beauty, till now I never knew thee." This reveals to us one of the elements which contributes much to the weakness of King Henry VIII. In the empire of his consciousness, sensuous enjoyment was king, reason did the bidding of pleasure. He could govern English cities, but could not his own passions.

In this midnight reveling and drinking and dancing, we see nothing of Catherine. She is not there. In her noble nature there is nothing in common with such conduct. Her character, as we have seen it so far and as we shall see it rather fits her to implore the king to guard his own honor, to be just to his oppressed subjects, and to have charity for the unfortunate Buckingham.

In art everywhere, conflict heightens interest. In this play we have a series of conflicts, several of which are suggested in the first act. The first of these is that between Buckingham and Wolsey. Buckingham is noble, possesses

many of the elements of greatness, but his doubt that a beggar's learning and ability should outweigh a noble's blood, marks him unfit to live in a progressive age. He must perish. We have here also a suggestion of a conflict between Wolsey and Catherine, but no hint of its solution. We have suggested here also, at least a possible conflict between Henry and Catherine—suggested not at all by their treatment of each other, but by his passion for Anne.

This play is full of bright sayings, very suggestive and very significant. I do not know how I could close this article better than by quoting a number of them from the first act. I would suggest that these passages be used for general discussion in the institute. Each may serve as the basis for a five or ten minute extemporaneous speech. Some of them might be used in a similiar way by advanced pupils in the schools:

Nor.— Surelv sir,
There's in him stuff that puts him to these ends:

Buck.— A beggar's book outworths a noble's blood.

Nor.— Be to yourself as you would be to a friend.

Nor.—
Heat not a furnace for your foe so hot
That it do singe yourself. We may outrun,
By violent swiftness, that which we run at,
And lose by over-running.

Wol.—
We must not stint our necessary actions, in the fear
To cope malicious censurers. What we oft do best,
By sick interpreters, or weak ones, is
Not ours, or not allow'd; what worst as cft,
Hitting a grosser quality, is cried up
For o r best act. If we shall stand still,
In fear our motion will be mock'd or carp'd at,
We should take root here where we sit, or sit
State-statues only.

K. Hen.—
Things done well.
And with care, exempt themselves from fear;
Things done without example, in their issue
Are to be fear'd.

K. Hen.—
When these so noble benefits shall prove
Not well dispos'd, the mind growing once corrupt,
They turn to vicious forms, ten times more ugly
Than ever they were fair.

Sands.—
New customs,
Though they be never so ridiculous,
Nay, let them be unmanly, yet are follow'd.

A UNIFORM COURSE OF STUDY FOR CITIES AND TOWNS OF INDIANA.

R. A. OGG, GREENCASTLE.

A year ago the Association of City and Town Superintendents appointed a committee to formulate and report a course of study which might secure practical uniformity to the work of the schools. The report was presented at the recent meeting of the Association. The great interest in it was manifested by an unusually large attendance and the careful discussion of it through two entire sessions. The report was unanimously approved as a basis upon which to work and the committee was continued for a year to make such modifications as experience and the suggestions of members might warrant, and superintendents agreed to test it so far as practicable during the year. This vote indicates that there is a clear recognition that greater uniformity is desirable and that the reported course of study conforms in the main to what the superintendents are striving to attain. I propose in this article to give some reasons why such a course should be followed and follow it with a series in which the proposed course shall be discussed year by year. These papers will be made the means of presenting the suggestions which come to the committee, and if questions and criticisms upon the work indicated for the first and second years shall be forwarded soon, the work undertaken will be facilitated. As the Department of Public Instruction is publishing the report and will distribute the same to the cities and towns at an early day, teachers will have opportunity to test it and report wherein it is weak.

A uniform course of study pre-supposes a reasonable degree of uniformity in the organization of the schools as to length of term in months, number of grades under the care of a teacher, preparation of the teachers for the work, equipment as to supplementary books, etc. In all these particulars there has been rapid progress in the last few years. The superintendent of each system of schools has been striving with the best light he had to solve the problem of the best course of study for the schools under his charge. The interchange of thought and experience in educational gatherings and the

exchange of school manuals has brought these workers nearer together, so that the courses of study planned are not the efforts of persons working singly but the resultant of the judgment and experience of many. The school journals which not only reflect but also direct educational thought, have aided materially to secure the progress made toward unification. The time came when it seemed desirable to hasten this manifest tendency by planning a course which should be in harmony with the best educational thought and practice of the times and adapted to the conditions prevailing in the majority of the schools. This tendency is itself a strong argument for organic unity. If uniformity means loss of individuality in schools or in teachers, it would be something to be deplored; but it contemplates not such a loss but a gain; for the main features of the work having been agreed upon, superintendents and teachers will be left free to spend their energies upon methods of doing the work rather than in passing upon the order and value of material. The teacher works with more assurance if she realizes that the subject matter she is using has the approving judgment of those she regards as competent to determine its intrinsic value.

There must be material best adapted for the child's development at any stage and a uniform course of study assumes to have found this adaptation and to introduce the teacher to the child's need and its supply at any point in his eight years of common school education. The uniformity will consist not so much in the particular material suggested as in its character. There may be several myths which have in them the same elements of value to the child, many stories or biographies well adapted to waken in him the emotions and thoughts appropriate to his present need. Differences in environment and conditions will call for modifications of the matter used, though the end to be attained remains the same and these things will call for a discriminating judgment of the teacher.

The argument thus far rests upon the general uniformity in the needs of pupils at any period of their development; a second will be found in the demands of economy in the interest of the considerable number of children who change residence more or less frequently during the period of eight years.

The cry for uniform text-books was loud enough to be heard by the State Legislature, and now the child removing finds the books he has been using are those he needs in his new home, or, rather the ones he would use were it not that the courses of study are so widely different that he may be compelled to purchase a lower or higher text to be properly classified. Some subjects which he has already studied, his classes are just entering, while some he has not had they have completed, and thus he again takes what he does not need and hastily sketches what he most needs. He is frequently discouraged by being put into a grade lower than that for which his development fits him because the order of work is such that he cannot take the work of the higher grade. It is often a matter of real distress to superintendents that they cannot classify to advantage the children who come from other schools. Since the child is of higher value than the money invested in books, the true demand of economy is not for uniformity of books but rather for a uniform course of study. The loss of a few dollars for new books brought about uniformity of texts; should not the loss of a precious year of the child's school life be sufficient to secure uniformity of the course of study?

PRIMARY DEPARTMENT.

Edited by MRS. SARAH E. TARNEY-CAMPBELL, Supervisor of Instruction in the
Anderson Schools.

OUR DISTRICT SCHOOL.

The matter of our district schools is one of the most important considerations to the educational people of Indiana. My own connection with a particular district school when a child and the work I have since done over the State during the last six years where I have been meeting hundreds of these teachers, more of them than of any other class, has continually forced upon me the needs of our district schools. But if all this had made no impression upon me, certainly this last fact would. There are 541,570 children enrolled in all the schools in this State, and of this number 350,633 are in the district schools. That is, out of every 54 children, 35 are in the country. In making this calculation, I counted all the in-

corporated towns and cities together, so this estimate, 35 out of 54 is really lower than it should be.

The first fifteen years of my life, in fact, all of my education before entering a high school was obtained in a little, old frame building in an out-of-the-way district in DeKalb County. All of the particular teachers, and many with their most striking characteristics, are very vivid still. I never hear of an advance in educational thought or practice but that little frame building comes up to me, and I wonder how much better some of us might be to-day if the teacher of that time had not only known of such educational ideas as are current to-day but had also practiced them.

I have a vivid recollection of the visits of the county superintendent—the fright of the teacher, the awe of the pupils and sometimes the dreadful “quiz” the superintendent inflicted upon some unfortunate class. He never came more than once a year and frequently not so often. This visit was a very unusual thing, and I remember running the greater part of the mile and a quarter home to announce to my parents that the superintendent had been to visit us. As well as I can remember, the world moved on after the visit very much as it did before and we never knew exactly why the superintendent came. My parents still live in that district and I never go home but I inquire into the workings, the methods, the devices, the discipline, the general management of that particular school. It is the one close bond I have had all these years with the district school system of Indiana. It is the one I never fail to visit when at my old home if the school is in session, and it is this school, as it now is and as it was when I was a child, that has prompted me to make some little investigation as to the opportunities given the district schools of Indiana to keep pace with the graded schools. Let me give you at this time some of the results of this inquiry.

I sent out to seventy county superintendents of this state these questions: “How much time do you spend in each district school during the year? What do you consider the weakest place in the professional work of the teachers of your county? What do you think of the opportunity of the county superintendent to judge of the actual teaching ability of the teachers of his county? Could this be helped by having some

one supervise the work of each township? Can you suggest any other way? Are your teachers as fully prepared professionally for their work as they should be? If they are, to what special advantages do you attribute it? If not, can you suggest something feasible for this adequate preparation?"

In the first place, affairs seem but little better now than in the days of that old frame school-house—on an average the time each superintendent spends in each school is only two hours and a half each year. In some cases the superintendent says he spends an entire day in some schools but it always takes the time from some other. One superintendent says, "I never visit any after the first of February; with teachers manuscripts on one hand and manuscripts from candidates for district graduation on the other, and on top of all reports that must be kept, I am utterly unable to do more than this." Another superintendent says, "After February 1, I can only visit one day out of each week." Another well-known superintendent says, "The opportunities for the superintendent to help his teachers professionally are every year growing less because of the added burdens placed upon him."

Any one who has really tried to oversee school work, who has had any certain notions he has wished to have embodied in his schools, knows how utterly impossible it is to do very much without frequent consultations about the work and frequent observations of the actual work the teacher is trying to do in that particular line. A superintendent of a town or city school feels he has very little time indeed for giving assistance to individual teachers in their work if he has to teach all but two hours in the day. But in a school of ten teachers this superintendent can spend two hours with every teacher every two weeks in seeing the actual work of the school and has frequent opportunity to talk over work at other times. But in the case of the county superintendent, when he has two hours which he might spend in a school room, quite frequently the very teacher that needs his visit most is five, ten or fifteen miles away. A county superintendent is subject to the same time and space limitations that bind other men and of necessity quite a part of his time must be spent on the road.

One remedy was suggested for this lack of supervision. It

was to have some one in each township in charge of all the work in the township, that is, institute work and to visit the particular schools of his township and to do the great part of the supervision that the county superintendent now undertakes. The superintendent would be the head of the county educationally, these township supervisors would be in direct communication with him and try to work out the best thoughts the county superintendent and the township supervisor together might have. Several objections are offered to this. One is, that there would likely be a lack of harmony between the superintendent and these supervisors and that the particular ideas the superintendent might hold would after all be very imperfectly carried out.

But another objection was urged and one that to me seemed especially valid at this time, and that is the financial one. Many of the superintendents replied saying they believed the plan of township supervisors in conjunction with the county superintendents a wise one, but not feasible at the present time on account of the added expense necessary to employ these persons. This might partially be met by reducing the number of supervisors, by requiring each supervisor to have charge of two or three townships.

But another plan is offered and it has almost the unanimous support of the superintendents, one they think would prove very helpful to the schools of Indiana and at a minimum expense. It is this, that the state provide a clerk for each superintendent, this person to take charge of all the reports, keep track of all the books that must pass through the superintendent's hands, and help examine the manuscripts for teachers' license. This last item is almost appalling in itself when we stop and count up the number of manuscripts the county superintendent must examine, not in a cursory manner, but critically enough to pass muster with the state superintendent, if an appeal should be taken. We wonder sometimes how he ever finds time to visit schools at all. Now if the great burden of this work could be put upon a clerk, it does seem reasonable that the county superintendent could indeed be a county superintendent. One superintendent even says he thinks it would be well to have but two examinations a year and have the manuscripts examined by a non-partisan

board appointed by the State Board of Education. So much for the actual help given individual teachers through the visits of the county superintendent and the two plans proposed for relieving this, first, that of persons having supervision of the work of one or more townships, and the other, allowing the county superintendent a clerk.

Let us now consider what some of the school people of Indiana think are the weak places in the teaching in their particular counties and which they are well-nigh powerless to improve. The greatest number of superintendents say that the poor work in their counties is in most cases due to this,—lack of insight into the true needs of a school and the need of some kind of training in the actual teaching and management of a school. This also includes the answers of those superintendents who have said their teachers do not know how to assign lessons definitely enough for the pupils to do the best kind of preparation, also those who do such indefinite work in recitations that there is no point made or if there is one made it is gone over in such a milk and water fashion that it is not impressed upon the class. The greatest amount of poor work in the state is then attributed to this cause. By far the largest number of superintendents say that their teachers do the very best they know but they do not understand the general management of a school, how to present the subjects and really do not know what it means to teach geography reading, arithmetic, and other branches. Again, the second opinion of superintendents as to the cause of their poor work is that it is due to poor scholarship, and many of them suggest that no teacher should be licensed who has not had at least two years of the high school course or its equivalent. Still other superintendents think the poor work, in the main, is caused by a lack of appreciation and sympathy, that the teachers do not appreciate what the school should do for the children. Their thought, in some instances at least, is that this would be helped by raising the age for teaching and not allowing girls and boys of sixteen and eighteen to be licensed for the work.

Some of the superintendents specified the particular branches that are the most poorly taught. Among these reading is oftenest mentioned and language comes in for

second place. Geography, arithmetic, history and spelling are also given, but it is noticeable that reading and language are most often given. It is also said that the poorest work is done with the three lowest classes. And I might add that this was the case in that little old frame school house. I remember there was one reason always given for slighting the children and that was that the large pupils would not be in school much longer and that they must get all they possibly could now; the little people had plenty of time. There was probably another reason, but one much less well defined. That was that the art of teaching children, helpless, uncertain, wavering, dependent as they are, is much more difficult than the art of teaching grown boys and girls. This then, indicates the general feeling of the superintendents of the state as to the main cause of weakness in the teaching in our district schools; that it is due in a large measure to the inadequate training the teachers have had for their work, including in this the presentation of subjects, the management of the school and the lack of appreciation and sympathy.

Now let us consider for a few moments the last point, and as it seems to me, the most important of all. It is the answer to the last question, "Can you suggest something feasible for the adequate preparation of your teachers?" Various answers to this question were given and I am sure you will be glad to hear some of the different opinions. I will enumerate hurriedly what several of them have given: "Have township institutes with a good instructor;" "refuse to license persons to teach as young as is now done;" "insist on better scholarship;" "have a better public sentiment;" (but how to get it is the great question); and "longer terms so that the wages received for the year's work would be greater;" "divide the office of trustee into civil and school trustee and have a school man for school trustee;" "divorce the schools from politics."

Now I have come to the two things most often suggested as remedies for our poor teaching. The least of these (least in number of superintendents mentioning it, and least too in point of importance) is this, that the teachers of the district schools should be paid better wages for their work. While this is true, it is frequently questioned whether a rise

in wages would increase the quality of the teaching. The best that can be said of a rise in wages is that it would hold some good teachers in the profession longer, and probably some others would save their money and obtain a higher education. But on the other hand, higher wages would also hold some teachers who do poor or only mediocre work, who have no interest in their schools, and who frankly say they teach only for the money in it. These would also continue longer than they do now. As I said, it is urged that if higher wages were paid, then teachers could save enough money to take a course of study in some higher institution. It is true that they could, but it is also true that in many, many cases they don't and of course if this does not result from higher wages, then the teaching itself would be no better. Too often the extra wages bring a self-complacency, a self-satisfaction with the work done because the remuneration is satisfactory. As long as the wages received are not low or unsatisfactory, there is always an incentive to do work that would place the worker in position to earn more money, and many of the cases of teachers taking courses of work in higher schools, is partly at least, to become able to hold better paying positions. It may be true that higher wages are needed but it is equally true that higher qualifications are needed and the two should go together.

Now, I have reached the final point, the one the superintendents urge most strongly of all, and the one that seems to me to be at the root of the whole matter. The way to improve the quality of the teaching is to improve the quality of the teachers. This is true in every kind of school, district and graded, high school, college and university. "The way to resume is to resume" was political advice that was sound; the way to improve is to improve, is just as valid. Most of the superintendents have said that a higher qualification of teachers should be insisted upon, and I wish to add, not simply in district schools alone, but in every graded school as well. I have simply selected the district schools because opportunities for help from a superintendent are so much poorer there than in graded schools.

But in order to be able to insist upon this training and to require it, corresponding facilities must be offered for obtain-

ing it. I am sure it can be of no greater surprise to any of you than it was to me, to see how generally the county superintendents of Indiana feel the need of better training for their teachers and how fully they appreciate the meager facilities of Indiana to furnish this training. The state has but one training school, that at Terre Haute, in the southwestern part of the state. Let me quote from some of the letters referring to this better qualification of teachers. One says, "To bring this about, we ought to have another free state normal in the north part of the state and one on the east side;" another, "I think the thing most needed in our schools is a thorough professional training of all teachers. To the end that all teachers might secure this training, the state should establish a sufficient number of normal schools and should compel all persons desiring to become teachers to take a course of training in them;" again, "We should have more normal schools supported by the state, or some of the independent normals should do a higher grade of work;" also, "Nothing but thorough work in a first-class training school will do, in my judgment;" also, "It is my opinion that our state should provide more schools for the professional training of our teachers. Terre Haute is, no doubt, doing much to relieve the situation in the locality in which it is placed: but we are too remote to derive the benefit we should. We ought to have a state normal in northern Indiana, and perhaps they are needed in other parts of the state. Their number should be limited only by the needs of the schools."

It is needless to quote further. The men of Indiana in closest touch with the district schools of the state, who have under them 10,000 teachers out of the 14,000 (our county superintendents) almost unanimously agree that the one great thing necessary for our public schools is a class of better trained teachers, and they also recognize the fact that Indiana is very poorly equipped indeed for this kind of work. Illinois, just at our door, has four such schools.

As the result of a somewhat careful study of the present conditions of the district schools of Indiana there are two things that seem to me feasible that would greatly benefit the school work. The first is to allow each county superintendent a clerk so that he may have an active supervision of the

schools of his county and be able to devote his entire time (or nearly so) to the actual work his teachers are doing. It seems to me that allowing the county superintendent a clerk to relieve him of much of his work would be helpful to the 350,000 district school children in this state, and at a minimum expense. But I also wish to say that I do not think this plan as valuable to the educational interests as would be the appointment of township supervisors to work in conjunction with the county superintendent. As suggested before, these supervisors might have charge of two townships and in some cases I have in mind where the townships are small they might have charge of three. In this way the expense would be much less.

The second thing I wish to suggest as something that must be done before our schools can be materially better, is that the state establish and support another free training or normal school. It may be necessary to establish more than one to provide facilities sufficient for all our teachers to receive adequate preparation to do such school work as will stand the test of intelligent criticism. The training school idea in this new normal school must be emphasized. Our teachers need a great deal of actual teaching work in this preparation; they ought to have the entire charge of a school for at least two or three weeks, and in many cases more than this.

In no place is our school work more defective than in the disciplinary or management line. Our teachers must have actual experience in managing schools. They must show themselves full of tact and sympathy and able to control with but little friction. If they cannot do this, the state should not put its seal of approval on their work and call them professional teachers. All this preparation should be made under the guidance of teachers skilled in every grade of work. It must not be enough that pupils stand well in their knowledge of the theoretical side of the branches to be taught nor of the theoretical way of management. To meet the requirements that confront us in our public schools of to-day, they must be trained in the actual work of the school. Then, too, they must continually measure to this high mark after they have gone out into schools of their own.

According to the report of 1894, there were 14,000 teachers

in the state; of this number 10,255 are in the district schools. We have but one school in this state that has as its purpose the training of common school teachers. This school is crowded and yet it is only able to send out from 75 to 100 graduates a year, when there are more than 2,000 new teachers needed each year to supply the district schools alone, to say nothing about the graded schools. And this school is so crowded that it is compelled to graduate some of its students when they have given as few as four lessons, that is eighty minutes or one hour and a third, of actual teaching work and know nothing at all of the discipline. Certainly it is time that this condition of the Normal at Terre Haute should be relieved by establishing other similar schools to help carry out this work. It has been the pioneer in Indiana and for many years answered pretty fully this particular need. But the need has now grown beyond the capacity of that school to supply. And indeed very few of the students graduating from Terre Haute ever go back into the district school, so by far the greater part of the 350,000 district children never have the advantage of a trained teacher. The teachers who are trained go into graded schools. Let us remember that out of every 54 children in schools in this state 35 are in the country, only 19 in towns or cities. The cry of these 350,000 children in the district schools ought to be heard as well as the cry of only 191,000 in the graded schools. Let us meet this emergency.

DEPARTMENT OF PEDAGOGY.

[Conducted by **ARNOLD TOMPKINS**, Chair of Pedagogy, University of Illinois, at Champaign.]

APPERCEPTION, CORRELATION, CONCENTRATION.

There is one fundamental conception under all these expression; namely, that the world is an organic whole. To find this unity in the diversity of parts is the motive in all thinking. The biologist is striving to find the germ of life from which arises the infinite diversity of life and in which that diversity has its unity. The sociologist is seeking a unifying principle in the bewildering diversity of social phenomena; and the historian exhibits the continuity in the

seeming capriciousness of national life. The object of the philologist is to connect all languages in a common life and growth. "There is no end to the sky, and the stars are everywhere" yet the astronomer would bring them into system and unify them under law. Whether in the smallest concerns or in the largest interests of life and thought the whole motive and movement is under the tension between diversity and unity.

Such is alike the law of being and of thought. Everything, except the self-existent, exists in and through something else. Nothing exists in and of itself. Everything is a part of a whole, and a whole having parts; and nothing can be thought without thinking of it as a unity of its own elements and at the same time as being an element of a larger whole. If an object is to be described or narrated it must be grasped in its own unity at the same time that it is swung into the unity of a larger whole; and this is because the thing itself thus exists. If a general notion is to be expounded it must be given its own unity through its particular attributes, and at the same time its connection with the world about it through its universal attributes. As every object faces both inward and outward so every process of thought moves both inward and outward. Thinking is relating, because things are related. Things are bound together in themselves, and must be bound together in thought; hence, the word intellect. The mind concentrates because things are concentrated; it correlates because things are correlated, and it apperceives because everything exists in and through something else. A brick, as well as an idea, exists by virtue of the law of apperception. Every particular thing is born out of a general; and not the general out of the particular; and so percepts are born of concepts, and not concepts of percepts. One can not perform a particular mental action except in and through a more general action; just as red apples cannot be produced except in and through an energy which produces apples in general. One cannot produce a triangle except in and through the action which produces all triangles; and so one cannot think this triangle except in and through the action which produces the idea of all triangles, apperception.

All this means nothing more than the simple truth that

the universe is a universe. However diverse things may seem the faith in which all life moves is that there is continuity among things. This is the simple faith of the unlettered, and the avowed truth of the philosopher. Whether it be a Spencer, who announces the unity in the law of evolution, or a Hegel, who finds such unity in the principle of self-activity, the motive of the search is the same—the unity of the universe. Now this universal motive and method of thought should be recognized in every detail of school work. For this reason much is to be hoped in the present challenging of attention through the effort to give currency to a new pedagogical vocabulary. In striving to define these new terms we were forced to deal with the great laws of thought, which lie at the basis of all pedagogy,—not new laws, but laws which have been recognized since man thought on thought. Yes, I know that the situation becomes humorous sometimes; but we must accept it for the good it will ultimately do. If there be those who think that new faculties have been discovered with new terms, let the delirium come as with new wine; it will serve to give intensity and the needed missionary force.

THE AIM ONCE MORE.

Pedagogical inquiry has three, and only three, distinct phases: (1) The aim to be realized, (2) the psychical experiences by which the aim is realized, and (3) the instrumentalities in devices and organization by means of which the experiences are produced.

Of these the aim is the organizing and guiding element. A teacher can do nothing by way of rational procedure without a clear and firm grasp of the result to be accomplished. Yea, more, he can do nothing well and with pleasure to himself, without an aim in which he believes; without a conviction born of a worthy purpose. Thus the aim is both the guide and the inspiration to the teacher. It is the primary source of professional spirit; for this is but consciousness of the aim in the process of realizing it. It is obvious, therefore, that the higher and truer the aim the more comprehensive the guidance and the richer and fuller the scope of prof-

fessional spirit. Every person who becomes a teacher is born again, and that of a purpose which lays hold on the truest and best in human life.

It will serve to clear the vision for the highest view to arrange all the diversity of aims under the relation of means and end. All aims that have been held, or can be held, regard man either as a means or as an end. Of course he is both and both aims may be worthy. But when viewed as an instrument, it must be to some end found in man. The end must, finally, be located in the man himself. It is obvious that in the early history of education man was regarded as an instrument. In China and Sparta the individual must be sacrificed to the state. In Plato's Republic we have the same view. The weak children must be left exposed to die, since they cannot serve the state. The ideal republic must be made at the sacrifice of the individual. It is surprising to note how fully education in modern France and Germany educates the individual for the glory of the state. Even in our own democratic country, where individualism seems to be duly recognized, we still eloquently insist that citizenship is the end of education. In the recent rapid development of industrial schools we have recognition of the fact that man may be made an efficient instrument of industrial service. Even when church schools were established to secure an educated ministry, the individual is still considered a means to some good beyond himself.

Gradually, as man in due course of history discovered himself, discerned that he must save his own soul if he lose all the world beside, we have glimpses of a higher view of education. As man becomes an object to himself, becomes conscious of his own worth, he cannot consent to be reduced to a mere instrument to the church or the state or the industries. Of course we know that the individual cannot save himself except by losing himself in the objective manifestations of spiritual life. But there is a vast difference between using these forms as ends and as means. The individual lives in and through such external manifestations, but all of the organized social forms of life must themselves be tested by what they return to the individual. The individual must approach them with an altruistic consciousness, but a reflec-

tive view reveals the egoistic end. Self-realization is the standard and test of all institutions. Education which reduces man to means always has in view self-preservation; but self-preservation has no meaning except in self-realization. Why preserve the self? Principal Grant of Canada, has said that self-realization, and not self-preservation, is the first law of life. And Dr. Dewey of Chicago University, puts the same thought when he says: "education is not a preparation for life; it is life."

But all I mean to call attention to here is the fact that in discussing aims in education, that they be distinguished into those which regard man as an instrument and those which exalt him into an end, those which look to self-preservation and those which seek self-realization. Both are worthy, but it is fatal to make the means an end.

Out of these two views of the purpose of education arise, of course, two corresponding views of knowledge of school subjects, when it is said, as maintained by Cardinal Newman, that knowledge is its own end, it is implied that man is his own end. When knowledge is regarded as its own end it is thought of as a constituent of the individual mind, as forming that mind for its own sake; as being that mind. Much embarrassment that the teacher is under in trying to explain the value of subjects in terms of instruments would disappear if the teacher should seek the explanation in terms of mind and life. It may be difficult to explain the practical value of music, grammar or algebra; but in putting the value in terms of mind, the difficulties disappear. If we cannot explain the practical value of things we know to be good and indispensable to the higher life, then let us shift the argument to grounds not debatable.

LEND A HAND.

[This department is conducted by MRS. E. E. OLCOTT.]

STUDYING BIRDS.

To the editor's sanctum came a letter, a part of which ran as follows:

"I have been unable to get from pupils ten, eleven and

twelve years of age, a satisfactory description of a bird from an outline, as

A whole	{	size	{	head
		shape		neck
		covering		wings
		color		tail
				feet, etc.
Parts				

"Perhaps I expect too much of them but feel that I do not. Will you please give a description from an outline and thereby 'Lend a Hand' to one in trouble?"

The "hand" is promptly and cordially extended. May it be of service to the earnest teacher is the sincere wish of the editor.

The first thought that comes is one from Hawley Smith, "When a machine squeaks, the place to put the grease is right where the squeak is!" The editor hesitates to positively advise pouring oil just "here or there," lest it should be wasted because applied where the squeak *isn't*, be indeed what Hawley Smith calls "superfluous grease" * * * such oceans of wasted school grease, so to speak, that not only does no good but smears and litters up what would otherwise be clean floors and reasonably clean children."

So I shall merely offer suggestions that may assist you, dear inquirer, to locate the squeak "in the children's mental mill" and "to put the grease just where that squeak is when once you have found it."

Perhaps the squeak lies in asking twelve-year-olds to *describe* birds. Is that the most interesting form of presenting the subject?

The author of a language and composition book, suggests that narrative and not description is the natural form of attractive composition work. He says "The untutored mind, whether of child or adult will receive pleasure from one of Sir Walter Scott's thrilling narratives, while it will hear with indifference his most brilliant description of character or scenery. The truth is that the evolution of the child's mind should follow, as nearly as possible, the lines of evolution of the race. Among all nations emerging out of barbarism, narrative of some kind is the earliest form in which the mind

finds enduring expression. So it is with children, in them as in their fathers the love of story predominates."

If this be true, wouldn't it be well to bring in the description of a bird incidentally while telling something more attractive?

Your letter asks, "Will you please give a description of a bird from an outline"? Well, you see my heart is not in describing birds from outlines, so my contribution would be cold and formal.

Suppose, instead, that you put yourself in your pupil's place and describe a bird from the outline you have given. Estimate the time and thought and kind of thinking it requires of you, and consider the advantages that your trained mind and general information give you, and then judge how difficult the work is for the children.

I presume your class is studying birds as a part of their nature work; that your purpose is to awaken a lively sympathetic interest in "the little friends in feathers," and a desire to know more about them. With the gaining of information you wish to "correlate" language work i. e. learning to express oral and written thought in a clear, pleasing manner. Correct punctuation, capitalization, and spelling follow in the train.

To compass this, would not it be wise to so present the subject matter that the pupils become absorbed in it, and wish to speak or write because they desire to tell something. Wouldn't some flexible general plan serve better than a rigid outline?

At the hour for the "bird class" to recite, if a real, live canary could be placed before the pupils, an interesting question would be, "Who knows how to take care of a canary?" When the food and drink as to variety and quantity, cleanliness of cage, light, heat and everything pertaining to the health and comfort of the bird have been discussed, it might be a propitious moment to say, "Who can write directions for caring for a canary?"

Other lines of thought are, Why are canaries kept as pets? Are all pet birds sweet singers? Some are kept for their beautiful plumage, or ability to learn tricks.

What will add to the value of a canary? Can canaries be taught certain tunes? How? If no pupil knows, the class may be told that it is claimed that if young canaries be allowed, under favorable conditions, to hear only one tune and that over and over again, they will learn to imitate it. It may be a song sung again and again everyday by the person who feeds them, or some air played by a music box. It is said that a young canary kept in the room with a fine singer of some other species, as a red bird, will learn to imitate the red bird's note. Then, approaching nearer your outline, let the pupils, looking at the bird, name the principal parts. Ask why a bird does not tire clinging to a perch all night, and whether it walks as a pigeon does. It would be worth while to note how many pupils know that the canary *hops*. Ask where the mandibles are. Few will know that the upper and lower mandibles form the beak. A whole recitation may be spent in talking of the beaks of various birds. The use of the tail as a rudder is another item of interest. A child seeing a bird with a long, slender tail, may know that the bird can dart hither and thither, because its tail enables it to turn quickly. Short tailed birds must fly in straighter lines. The study of wings is even more interesting. How does a bird fly? A zoology will tell as far as is known. If a bird's wing can be obtained, the class will note its lightness and examine the arrangement of the feathers with interest. Interesting facts may be gained in this direction. How many eggs does the hen canary lay before she begins sitting? How long must she sit to hatch them? What do the young birds eat? How are they fed? These questions are best answered by some one who raises canaries to sell.

When through a series of bright, enthusiastic lessons the class has become thoroughly acquainted with the canary, the closing lesson may be to sum up what they have learned in an essay. And to each creditable essay the teacher might attach a knot of yellow ribbon—real canary color.

Next, thought may be directed to wild birds. Write upon the blackboard a list of birds' names suggested by the pupils

alone. No matter how common the bird if it does not occur to the children, do not add its name to the list.

A child may name any bird he has seen, heard of or read of. When the pupils can think of no more names, a second list may be made from the first, consisting of names of birds which one or more of the pupils have seen alive, and would know if they were seen again. As each name is written, the child giving it tells, if possible, where he saw it and some fact about it. Then comes a third list, consisting of birds which the pupils have seen in the town or neighborhood. This list may be very short, but if the pupils are enthused it will grow longer as the months go by, and bright eyes see birds which previously they "saw not."

The unloved English sparrow will probably be on each list, and have more acquaintances among the children than any other bird. So he might be taken to be, as the canary was, a subject of special study. It is barely possible that a sparrow might be caught and caged temporarily for the benefit of the class.

There is a tendency, if pupils follow consciously a given outline, to "stretch" the bird to fit the outline whether the facts are interesting or not. For instance, what very striking difference is there between the size, shape and covering, or the head, wings and tail of an English sparrow and a canary? Then why spend time on them? Could the pupils distinguish between an English sparrow and a canary if the sparrow's feathers were dyed with yellow?

A traveling vender of canaries was accused of catching English sparrows, coloring their feathers and selling them to the unwary as canaries. I cannot vouch for the plausibility of the charge.

Suppose a general plan should be to lead the pupils to select some bird for study. Then gain every available bit of information about it, to be given orally and then condense the facts into an attractive, written form.

In closing I would emphasize the reading of anecdotes, stories and poems in connection with the study. The work of the birds in "The Strike at Shanes" would be appreciated.

So would Longfellow's "Birds of Killingworth." I close with a stanza from an author unknown to me, which has a pleasant ethical suggestion:

"Little birds sit on the telegraph wires,
And twitter and chirp and flutter their wings,
They seem to think that for them and their sires
Stretched always on purpose those wonderful strings,
And perhaps the Thought that the world inspires
Did plan for the birds among other things."

DESK-WORK.—PERFORATING.

One of the kindergarten occupations that deserves a place in more school rooms is perforating designs on thick paper or card-board. The Milton Bradley Co., through their agents, Baker and Thornton, Indianapolis, will furnish a perforating cushion of fine, extra heavy felt with strong card-board back, and a perforating needle with a two-inch handle, for twenty-two cents, including postage. Perforating paper, card-board and Bristol board are correspondingly expensive.

Teachers who do not feel justified in investing so much, need not be discouraged. "Where there's a will there's a way," and I have seen four "ways" of supplying perforating cushions, used by wide-awake teachers in different parts of the state. Perhaps, I should say three ways, for one teacher discarded the cushion altogether. Her pupils held up the card-board in the left hand while perforating. Another teacher bought felt, cut it the desired size, and used it without a back. A third discovered that pieces of Brussels carpets make perfectly satisfactory cushions. A fourth covered paste-board with one or two thicknesses of canton flannel, sewing it firmly. All four substituted pins for perforating needles. Any heavy paper, card-board or Bristol board will serve the purpose.

As to designs—Desk-work in December JOURNAL describes one way of making them. The stencil was used because the *rough side* should be the right side of the perforated card. The teacher may be relieved of the work of preparing the cards and pupils be afforded further training, as follows:

Give the pupils pieces of white tissue paper, which they lay upon simple line-pictures and copy through it, as upon

ground glass drawing slates with a lead pencil. (It is simply a use for the "tissue paper books," described in a previous JOURNAL.)

This tissue paper drawing is to be turned over—so the "wrong side" shows—and laid upon the card-board and both fastened to the cushion with pins, one at each corner. The pupils then perforate *through* tissue paper and card-board. The picture appears as it should on the rough side. A shade more difficult, perhaps, is a third way. The pupils write upon a piece of paper what they wish to perforate, for instance the words "Be true." If the writing shows through, it may be used as the tissue paper was. But if it does not, the first piece must be laid upon a second, and the pupils perforate through the written words. This gives the design on the second piece of paper, but with the smooth side up. So the second piece is turned over (as the tissue paper was) laid upon card-board and fastened to the cushion. Then the pupils re-perforate, passing the pins through the holes just pricked, and the words will then appear as desired "rough side up."

THE SCHOOL ROOM.

SQUARE MEASURE THE FIRST YEAR.

Outlines of a lesson given by Miss Schussler, in New York College for Training of Teachers, New York City. [Reported by E. D. K.]

The children, who had entered school for the first time last September, were seated with their teacher at a low primary number table checked in inch squares. Children are each given one square tablet.

Please place your squares one inch from the side of the table. Tell me something about your tablet, Ralph.

"My tablet is square."

(Children were asked to tell "stories," about the tablet which were designed to bring out the dimensions—how long, how wide).

Touch the edges of the square. Tell the number of edges of the square.

"The square has four edges."

"The edges of the square are all equal."

Tell the length of the upper edge, the lower edge, etc. (The children measure their tablets by the square on table.)

"My tablet is one inch on every side."

Then we will call this tablet a one inch square.

I am going to give you some things from my box now. (Gives out squares of velvet, carpet, silk, cambric and oil-cloth.) Tell me what you have.

"I have a square inch of velvet." "I have a square inch of silk." "I have a square inch of carpet."

(Teacher gives each child a two inch square tablet.) Put this tablet two inches from the table. Take enough one inch tablets to cover this new tablet I have given you. (Children lay on four inch tablets.) How many square inch tablets did you take to cover your two inch square?

"I took four one inch tablets to cover my two inch square."

You may fold and tear your two inch square (yellow paper) to show me how many tablets you used to cover your two inch square. (Children fold and divide paper into four square inches.)

In our two inch square how many square inches?

"I have found four square inches in my two inch square."

I have a little box at home two inches square. How many square inches will it cover?

A doll's table top is two inches square. How many square inches on it? (Take tablets, if you please, to find out.)

"The table top is four square inches large."

(Teacher gives each child a bright colored three inch square.) Find out by laying on tablets, how many square inches there are in it. O, one boy has found out without using tablets, I am glad of that.

"My paper has nine square inches."

(Teacher pours a quantity of tablets of different dimensions upon the table.)

You may take a one inch square; a two inch square; a three inch square. Now test these by the table and see what you have. Tell me what you have.

"I have a one inch square."

"I have a three inch square."

Edith, give George a square inch of wood. Ralph may give Reginald a two inch square of silk. George, what can

you give to me? Annie may hold up a three inch square. Mary may hold up a four inch square. Each of you may hold up the right hand; touch together one square inch on the table. (Many of these directions were given for review and drill.)

The strong points in the lesson were these: The children and teacher were all quietly seated at ease. Children were not writhing in all sorts of positions to convince the teacher they were agonizing with interest.

There was abundance and variety of material, pleasing to the eye.

The teacher was free from nervousness and not possessed with the idea that she must put those children in a fever of nervous anxiety to quicken their mental activity. They were allowed time *to think* and *to do*, and none were criticised, but when one did very good work he was commended.

The attention of the children was perfect. They were having a "good time," and never dreamed they were passing with bold, easy step along the uncertain pathway where lie in wait such puzzling questions as: What is the difference between two square inches and two inches square?—*Primary Education.*

GEOGRAPHY LESSON.—OCCUPATIONS.

WALTER N. VANSKOYOC, CRAWFORDSVILLE.

Before taking up the subject of occupations in the book, select the names of persons living near the school and have the pupils write short compositions about each one similar to the following:

Mr. A is a mason. He builds houses of brick and stone. His tools are the trowel, etc. Or, Mr. B. is a blacksmith. He shoes horses. His tools are the hammer, etc. To this may be added a description of his shop and many other things.

After this work is completed, the different trades should be classified in the recitation, into the general classes of mining, manufacturing, commerce and agriculture. It is certainly a rational plan to teach the occupations near home before using the book.

The names of the persons and their occupations may be used as the basis for the following lesson on the appositive, thus connecting the geography and grammar work.

TEACHING THE APPOSITIVE.

Select the names of persons with whom the pupils are acquainted. Select the names so as to represent as many different occupations and professions as possible. Write on the blackboard a sentence like this one. Mr. B, the blacksmith lives in the village. Then require the pupils to write statements about the persons whose names are on the blackboard using the occupation of each after his name to show who is meant. If two or more sentences are written about the same name, but representing persons of different trades, so much the better. This work can be done by a pupil in the third grade and I think it a good way to begin the study of the appositive.

FOR OPENING EXERCISES.

1. Subject - - - - - A LIE STICKS.

"Would you tell a lie for three cents?" asked a teacher of one of her boys.

"No, ma'am," answered Dick, every promptly.

"For ten cents?"

"No, ma'am."

"For a dollar?"

"No, ma'am."

"For a hundred dollars?"

"No, ma'am"

"For a thousand dollars?"

Here Dick was staggered. A thousand dollars looked like such a big sum. Oh! what lots of things he could buy with a thousand dollars. While he was thinking about it, and trying to make up his mind whether it would pay to tell a lie for a thousand dollars, a boy behind him cried out:

"No, ma'am."

"Why not?" asked the teacher. Now, mark this boy's answer and do not forget it.

"Because, ma'am," said he, "*The lie sticks.*"

When the thousand dollars are all gone, and the good things bought with them are all gone too, the lie is there all the same.—*Selected.*

2. Subject - - - - - SUCCESS IN BUSINESS.

Any success that has come to me has been due largely to the fact that I have alway endeavored strictly to attend to business. Let me

give an illustration. When I was a boy in a printer's office and it came along 3 or 4 o'clock in the afternoon, I would say to myself, suppose the proprietor should come up where we were at work and say, "Robert what have you been doing to-day?" what would I answer? He never did such a thing, but I used to reason to myself, "Suppose he were to do it." If I could not, with pride and pleasure, point to what I had been doing, I would pack up at 6 o'clock and leave the place.

I consider that kind of spirit is an element of success, and there is always room for young men who show that kind of disposition. The indolent boy who shiftlessly goes through his day's work, will never reach the goal of success. The youth who is constantly watching the clock, waiting until it shall strike six, and tries to "kill time"—well, it will not be long before time will kill him, so far as business is concerned.—*Robert Bonner.*

3. Subject. - - - VALUE OF MENTAL TRAINING.

One of the most important and successful leaders in Massachusetts told this story to me. If anybody cares to know where, it was at the platform table of a very grand and swell public dinner, where we were both to make speeches before we were an hour older. The story was this:

When he was fifteen he told his father that he had gone to school all he wanted to go; that he did not want to go to high school—and, not to put too fine a point on it, that he would not go. He wanted to go to Boston and make his fortune. His father, as gently as a father could told him that the world of mankind is divided into two classes—those who give orders and those who obey them. He told the boy that if he left school then he would always belong to the class of those who obey, but that if he went to the high school a year or two he would always belong to the class of those who give commands.

The boy—shall we say of course—thought he knew better, and persisted. The father knew that, while he could lead a horse to water, he could not make him drink. He knew that he could make him go to high school, but he could not make him study.

The boy came to Boston, the typical boy of the stories; Whittington with a grip sack and a five dollar bill in his pocket. And he had not been there three months before he learned that his father was right.

"I found out, said he, that I was one of those who had to take orders and that I should be. I did not write well enough, I did not cast figures well enough. I knew no French or German. I could not state what I wanted done on paper."

"I had the courage and sense to go back on my tracks. Night in and night out, from September to June, I worked two or three hours in the evening high schools. Year in and year out it took me to make good the loss of that one year at the high school."

And he said to me that it was simply the grit which he put into this high school work which had made him what he is, a leader of men. If he told me that story with a quite distinct wish that I should tell it such youngsters as will read this article.

Ralph Waldo Emerson wrote to his daughter when she was away from home at school. "It does not matter so much what you study as it matters with whom you study." This is very important. If you can spend this winter with a man older than you are, wiser than you are, whom you cannot talk with nor look upon but you feel that here is a real living man—an almighty child of an Almighty God—do you take that chance. Very likely you will never have such another. And this is the greatest gift that God himself can give you.—*Edward E. Hale.*

EDITORIAL.

A SUGGESTION FOR A HAPPY NEW YEAR.

Suppose we think little about number one,
 Suppose we all help some one else to have fun;
 Suppose we ne'er speak of the faults of a friend,
 Suppose we are ready our own to amend;
 Suppose we laugh with, and not at, other folk,
 And never hurt any one "just for the joke;"
 Suppose we hide trouble and show only cheer—
 'Tis likely we'll have quite a Happy New Year!

—*St. Nicholas.*

For the year that is past and the year to come,
 For the ripened stores of our harvest home,
 For the home that blossoms here;
 For the thoughts and fancies that 'round it cling,
 For the hearts that love and the lips that sing,
 Let us thank our Father dear.

—*Dora Reade Goodale.*

1856—1896.

We extend to our many friends and readers the compliments of the season. We wish one and all a "HAPPY NEW YEAR." The year 1896 is before us an unbroken stretch. Not a mark, not a scar upon its smooth face. It is a goodly sight. It is as good a year as any that will follow in which to put our faults and weaknesses behind us, as good as any to be honest and faithful in, to be happy in, to grow wise in.

With 1896, the JOURNAL will enter upon its forty-first year. The unbroken field that stretches away in the white pages of 1896 are all unwritten. We will endeavor to put upon these unwritten pages the unsullied truth. It will be our aim to give each month the best ideas of our many excellent contributors, to keep our readers in line with the most advanced pedagogical thought, to be a source of help and inspiration. When the white pages are irrevocably covered, and 1896 in its

turn has given place to 1897, may we with our readers be able to affirm with confidence, that 1896 was

"A year for striving
And not for sighing;
A year to be glad in
And not to be sorry in."

HOWARD SANDISON, vice-president of the State Normal school, begins his series of articles in this issue of the JOURNAL. He writes on a new subject which is full of interest to the student of pedagogical principles.

PENNSYLVANIA now has a compulsory school law. The legislature of the state had twice before passed such a law, but both times it had been vetoed by the Governor. This time the Governor approves, or at least signs the bill, as he says, in accordance with the general wish of the people. The law also provides for truant schools.

THE uniform course of study for town and city schools that was discussed and practically endorsed by the late state convention of city superintendents, will soon be in the hands of all city teachers. It is to be hoped that all will give it a fair and unprejudiced trial. Let all criticisms and suggestions be reported to R. A. Ogg, Superintendent of Greencastle schools, who is chairman of the committee that formulated the report. For suggestions see Supt. Ogg's article on another page.

NOR only county superintendents, but teachers generally, will be interested in what Mrs. Campbell has to say, on another page, on the improvement of the country schools. She makes many suggestions that are worthy careful consideration. Those that do not depend upon legislative action are the ones that can be acted on at once. The Committee of Twelve, appointed by the National Educational Association last summer, at Denver, has for its special work the improvement of the country schools. This is one of the pressing educational problems of the hour. Read the article.

THERE has come to us as we are about to go to press the initial number of a new paper, published by the students of the State Normal School entitled "*The Advance*." It states on its cover page that it is devoted to the interests of the State Normal School, and makes its appearance, because the faculty, alumni and students feel that there is an imperative demand for some official organ that will keep the students that have gone forth in touch with their *alma mater*. This first number looks well, reads well, and will certainly be welcome to the army of normal students scattered throughout the state. May it have a prosperous and useful future.

EDUCATIONAL INDIANA.

[The following article is taken from *The Public School Journal*. Its author, George P. Brown, knows educational Indiana thoroughly. Those who know Mr. Brown know that he never flatters, and never makes statements contrary to his convictions.]

Indiana is, in some respects, the liveliest educational storm center of the Central States. It has earned the reputation of leading in several valuable improvements and carrying them on to success. Her Teachers' and Young People's Reading Circles began among the first and now surpass those of every other state. The grading of the country school and publishing of courses of study providing for monthly examinations and graduations began early in this state. And what is especially indicative of her intelligence, and spirit of hospitality to new impressions, she is now working to retain the good of this first step in the improvement of the country schools, while sloughing off the mechanism that is hanging like the Old Man of the Sea to the schools of so many other states that have followed her lead in these matters.

The organization of the educational forces of the state is very complete. So close is it that the more thoughtful friends of popular education have always feared that it would become a machine that would discourage all individual freedom in thought and action. But this fear has not been realized, and it is probable that the individual superintendents and teachers have now become so strong that they would resist any influence that sought to suppress their individuality.

The most important movement recently inaugurated is that of the Association of City Superintendents of the State in seeking to formulate a modified course of study for the city schools. The younger men of the state are most prominent in this movement and they greatly outnumber those who think there are no ways like the old ways. Many of the old workers are in the front rank of this movement.

The aim of it is to put into the schools a more rational and intelligent purpose and a more natural method. It finds much in Herbartianism that can be used to advantage. It believes that the destiny of the child, so far as the school is directly concerned, is ideal living in the social order into which he is born. This makes character the chief product sought in education, and finds much in history, literature, and science that helps to secure this end. It seeks to emphasize the content of studies so that it shall be deemed of at least equal importance with the form. It recognizes that knowledge has the two phases or aspects of *form* and *thought*, and that to divorce these is fatal to the proper education of the child.

This shows the general purpose of the committee who formulated a course of study for the consideration of the association at the November meeting. Nearly two days were spent in the discussion of this report and the ability displayed in the discussion of it was something to make one proud to be a school teacher. We have never heard anything superior to it in any convention of specialists. None

of the positions taken by the report were attacked successfully in the discussion. At the close those who had assumed the attitude of criticism united with the supporters of the report in passing a resolution of approval, and recommending that the committee be continued to make a final report at the next meeting. In the meantime the report is to be printed and circulated, and the superintendents are to test its workings in their respective schools and give the results of their experience to the committee.

SHAKESPEARE'S HISTORY OF HENRY VIII—A CRITICISM.

TO THE EDITOR OF THE INDIANA SCHOOL JOURNAL.

Sir:—In his essay on "Shakespeare," published in the November JOURNAL, Mr. Jonathan Rigdon made some statements to which I take serious exception and which you will kindly allow me to set right in the columns of your truth-loving magazine.

"Sometimes," says Mr. Rigdon, speaking of the Christian church, "sometimes it dominated over all temporal and spiritual things, and at other times it was the lowest and most debased object of the most debased period of the Middle Ages." It is easy to throw out such assertions, but hard to prove them. If the Catholic church was "the lowest and most debased object of the most debased period of the Middle Ages," how could she have "always been a saving force," which is conceded in our author's next sentence?

Mr. Rigdon continues: "When the Anglo Saxon race was living its childhood period, the church, like a parent, guided it over that age, when otherwise it might have fallen from lack of strength and purpose. But when it could walk, when it had become a man, and could think and act somewhat for itself, then the church failed to see its place, and sought to perpetuate its parental rule. The rebellion against its authority became the Reformation, from which both Catholics and Protestants have secured strength."

It appears that Mr. Rigdon considers the so called Reformation a justifiable rebellion against the authority of the Catholic church. Now, if the church really possessed the authority from above, which she claimed and exercised for centuries, she was the mother of the faithful, the representative on earth of God himself, and no man had the right to rebel against her, even if she had not been exercising her divine prerogative in the right way, according to the precepts of Christ. If her authority, on the other hand, was usurped, bogus as we Americans would say, it is hard to understand why she ruled the nations for over a thousand years so wisely and so successfully.

"Luther was not the cause of the Reformation, he was only an instrument," says Mr. Rigdon, and we would let this statement pass if the drift of his article did not show that our author misunderstands the true cause of the Reformation.

Cause and pretext are two different things. The occasion for the great break of Lutheranism in Germany was the method pursued by

Tetzel and other monks in the preaching and granting of indulgences. The fight on indulgences broadened into a clash of authority that swept into its current causes existing for centuries. These causes—says H. A. Desmond, in "Mooted Questions of History"—existed from the beginning of the Christian era, and they exist to-day. During the thirteenth and fourteenth centuries they expressed themselves in the heresies of Berengarius, the Albigenses, Peter Waldo, Huss, etc. They have since continued to operate with Protestantism, splitting it up into numbers of warring sects. The Protestant Reformation, in fact, does not differ in cause from the great heresies which preceded it. All had their sources in the tendency of the human mind to set private judgment above established authority, whether in religion, law, or letters.

The time was not ripe for a successful revolution when Wycliffe wrote, or when Berengarius preached; or these men lacked Luther's alternate cunning and boldness, and Henry VIII's power and unscrupulousness. Here was the difference; it was not in cause, but merely in conditions of success.

How was England "delivered from the yoke of Rome?" Let an impartial historian tell the tale: "A king whose character may be best described by saying that he was despotism itself personified, unprincipled ministers, a rapacious aristocracy, a servile Parliament; such were the instruments by which England was delivered from the yoke of Rome. The work which had been begun by Henry, the murderer of his wives was continued by Somerset, the murderer of his brother, and completed by Elizabeth, the murderer of her guest."—Macanley's Essays—Hallam.

Bishop Stubbs, whom no Protestant will charge with "Romish" prejudice, says in his lectures on Mediaeval and Modern History (p. 233). "Where Protestantism was an idea only, as in France and Italy, it was crushed out by the Inquisition; where, in conjunction with political power, and sustained by ecclesiastical confiscation, it became a physical force, there it was lasting. It is not a pleasant view to take of the doctrinal changes, to see that where the movements toward it were pure and unworldly, it failed; where it was seconded by territorial greed and political animosity, it succeeded."

Such was the "Reformation" in England, and such were its instruments; and "the consequences which flowed from it . . . were of a kindred character"—says Samuel Smiles in his History of Ireland.

As for Wycliffe and his translations of the Bible, the facts are these: Wycliffe's English Bible was not the first ever published in that language. "If histories be well examined—says Foxe, the Martyrologist—we shall find both before the conquest and after, as well before John Wycliffe was born as since; the whole body of the Scriptures by sundry men translated into this our country tongue." And the celebrated Sir Thomas More, an unquestionable authority, writes: "The whole Bible was, long before Wycliffe's days, by virtuous and well learned men translated into the English tongue and by good

and godly people with devotion and soberness well and reverently read."

We wonder what synod it was of which Mr. Rigdon tells us that "declared that a translation of the Scripture from one tongue into another was a dangerous thing and must be prevented."

The church was opposed to Wycliffe's translating the Bible for very good reasons, chief among them her knowledge of his rebellious spirit and of his ignorance of the Greek and Hebrew languages.

But let this suffice. I do not wish to encroach on the JOURNAL'S valuable space. Mr. Rigdon's article purported to be an exposition of the historical facts underlying Shakespeare's Henry VIII. What I have written will suffice, I trow, to convince the unprejudiced reader that it is not facts but fancies which Mr. Rigdon has given.

P. A. SCHARF.

QUESTIONS AND ANSWERS.

STATE BOARD QUESTIONS USED IN NOVEMBER.

SPECIAL NOTICE.—The State Board of Education, at its meeting in March, adopted the Reading Circle Editions of studies in Shakespeare and McMurry's General Method as the basis for the examinations in literature and the science of education respectively, for the year beginning with the November, 1895, examination. Questions will be prepared on these books, for the first six months as follows:

HENRY VIII.—M'MURRY'S GENERAL METHOD

November, 1895. History of Drama, etc., and Act I; and Preface and Chapter I, General Method.

December, 1895. History, Introduction, etc., and Acts I and II; and Chapters I and II, General Method.

January, 1896. History, Introduction, etc., and Act II; and Chapter II, General Method.

February, 1896. History, Introduction, etc., and Acts II and III; and Chapter III, General Method.

March, 1896 —History, Introduction, etc., and Acts IV and V; and Chapters III, IV and V, General Method.

April, 1896. History, Introduction and all the acts; and Chapter VI, General Method.

SCIENCE OF EDUCATION.—1. State some of the leading facts in regard to Herbart's life.

2. In your opinion, what has led to the present general interest in the educational doctrines of Herbart?

3. Why is it important that the teacher should have a clear and correct understanding of the ends of education?

4. What reasons are there for beginning a study of Herbart by considering his definition of education?

5. What does Herbart consider the central purpose of education?

- 6 Express your own opinion of the definition given.
7. What important influences, other than the school, help to form the character of the child?
8. How does Herbart's definition of education differ from that view which makes the aim to be knowledge and mental discipline?

(*Any five.*)

READING.—1. What is reading? Distinguish between oral reading and silent reading.

2. The vast majority of the people who read do the most of their reading in which of these two ways? What does this fact suggest to the conscientious teacher?

3. What do you regard as the limit of a safe and profitable correlation of studies, taking reading as a center?

4. State how you would attempt to make clear to a class of grammar grade pupils the difference between the grammatical and rhetorical pauses in the following stanza:

"He woke to die midst flame and smoke,
And shout and groan and saber-stroke,
And death-shots falling thick and fast
As lightnings from the mountain cloud."

5. Outline a course of supplementary reading that you deem well suited to the work of the 7th and 8th year grades.

HISTORY.—1. Describe the development of the petroleum industry in the United States.

2. Describe the operation of the Resumption Act of 1875.

3. What was the first effect upon the Southern State Governments of the enfranchisement of the negroes?

4. What was the connection between the measure for the location of the National Capital and the assumption of the State debts by the Federal government?

5. Were the people of the United States more democratic in 1800 or in 1850? Give reasons for your answer.

(*Any four.*)

SCIENTIFIC TEMPERANCE.—1. Has alcohol any of the properties of a food? If so, what?

2. What relation has alcohol to the "wine that would burn," spoken of by Pliny? Why do you think so?

3. What have been the results of experiments in the use of alcohol made by arctic explorers?

4. What effect upon the coagulation of the blood does alcohol have? Will this have any influence upon the success of a surgical operation? If so, what?

5. Why should the use of brandy, whiskey, or strong cordials be more dangerous than that of wines, beer and cider?

6. Have the habits of drinking men any serious prejudicial effects, physical, mental or moral, upon the constitution of their children? If so, what?

7. What is meant by rum consumption? To what is it due?

8. To what extent can the failure of the eyesight in young men be attributed to the use of cigarettes? Why? *(Any five.)*

PHYSIOLOGY.—1. Draw a section through a tooth, naming the different parts.

2. What is the origin and fate of the blood corpuscles?

3. What is a tendon and what are its relations to other tissues?

4. Into what groups can you classify glands, using the function of their secretion as the distinguishing mark?

5. Describe the process of respiration.

6. Describe one of the pairs of spinal nerves.

7. What are sense organs and where are they found?

8. What structures has man in common with the mammalia?

9. What are the advantages and disadvantages of bicycling compared with walking? *(Any five)*

GEOGRAPHY.—1. Name and define, in scientific order, the three parts of Geography as usually taught.

2. How do you account for the discrepancy of view amongst scholars as to the importance of the study of Geography?

3. Define zones. What determines the zones?

4. What geographical conditions have caused the great importance of the large peninsulas in the history of man?

5. To what extent can the description of journeys, such as Hall's, Kane's and the like, be used in the study of Geography? Why?

6. There are no long or large rivers on the west coast of South America; how does a relief map show the cause of this, as well as account for the immense drainage by those of the east coast?

7. What five States were erected from the great Northwest Territory? What celebrated document has largely determined the character of their laws and customs?

8. Locate St. Petersburg and tell what geographical conditions led to its founding at that point.

9. A vessel lands at New York whose cargo of sugar, tobacco and coffee was all taken in at one port. What port, probably?

10. Name five important products taken from or beneath the soil in Indiana in large quantities. *(Any six).*

GRAMMAR.—1. What is the subject matter of grammar?

2. Name each of the elements of a thought. Name the parts of the sentence, and show to what elements of the thought they correspond.

3. Name the leading divisions of written discourse.

4. How is the study of grammar serviceable in correcting errors in language?

5. Write a business letter.

6. Illustrate the use of sub-ordinate conjunctions.

7. Give the construction of the italicized words:

O soft are the *breezes* that play *round* the tombs.

8. Analyze: Thou *scalp'st* thy victim *while* his *pulse* yet beats.

9. Parse italicized words in the 8th question.

10. Express an attribute of action of the object boy. Think this attribute changed by the attribute neatly. Express your thought in a sentence. (Any seven).

ARITHMETIC.—1. Frame five suitable problems in fractions for a class of third year pupils.

2. At 50 cents per rod, what will it cost to fence a piece of land 216 rods long and 24 rods wide? Would it cost more or less to fence the same quantity of land in the form of a square, and how much?

3. A man presented for discount at a bank a note of \$516.40 payable in 90 days, bearing 7% interest, how much money should he receive, the rate of discount being 8% with 60 days yet to run?

4. Draw a negotiable note, payable in 90 days, at 5% interest. Find the proceeds of this note discounted at a bank in 10 days at 6%.

5. Give four underlying principles of addition.

6. Show how you would illustrate to primary pupils that ten of one order make one of the next higher.

7. A merchant bought goods at 20 cents per yard, and sold them at 40% profit after allowing his customers 12½% discount, what was the marked price of the goods?

8. What is meant by *board measure*? From your understanding of it, how many feet *board measure* in six sills 18 feet long and 6 by 8 inches? (Any six).

HENRY VIII.—1. Name five of the leading characters in this drama.

2. The main events of the drama are supposed to have taken place at about what time?

3. When Buckingham says:

“An untimely ague
Stay'd me a prisoner in my chamber, when
Those suns of glory, those two lights of men,
Met in the vale of Andren,”

whom does he refer to as “those two lights of men?”

4. Give a brief account of *the field of the cloth of gold*.

5. Buckingham inquires who planned the great pageant, and when informed that it was Cardinal Wolsey, says:

“The devil speed him! no man's pie is freed
From his ambitious finger. What has he
To do in such fierce vanities? I wonder
That such a keech can, with his very bulk,
Take up the rays o' the beneficial sun,
And keep it from the earth.”

Analyze the figure used in the first two lines.

6. What is the ground of Buckingham's intense dislike of Wolsey?

7. Why does Buckingham speak of Wolsey as “this butcher's cur?”

8. Explain what is meant by this sentence:

“A beggar's book
Outworths a noble's blood.”

9. Wolsey is spoken of as “This holy fox, or wolf, etc.” What qualities are herein imputed to him?

10. Characterize Buckingham.

ANSWERS TO PRECEDING QUESTIONS.

SCIENCE OF EDUCATION.—1. John Frederick Herbart was born at Oldenburg, May 4, 1776. His early education was guided by a mother who is described as a "rare and wonderful woman." Early in childhood his mind took great delight in philosophy, science, and music. Until the age of thirteen his instruction was private. At the age of fourteen he closed an essay on "Human Freedom," with the oft-quoted words, "It is contrary to all philosophy to reject an argument against which we have nothing to urge," an utterance which foreshadowed a prominent trait of the character of the future man. At eighteen he had Fichte for a teacher at the University of Jena. In 1797 he became a tutor at Berne, visited Pestalozzi, and began to study his ideas. He investigated and developed them until he proved that there is a science of education, and that *apperception* is the fundamental idea of the method of instruction.

After further study, he was made professor in philosophy and pedagogics at the University of Gottingen. Here he wrote several important works, all bearing upon education. In 1809, he was invited to the chair formerly held by the celebrated Kant at Konigsberg, where he remained for a quarter of a century, practicing and perfecting his pedagogical ideas, and publishing them to the world. In 1833, he returned to Gottingen, where he was professor of philosophy for the rest of his life. He died August 14, 1841. On the marble cross above his burial place is inscribed the following:

To penetrate the sacred depths of truth,
To strive in joyful hope for human weal
Was his life's aim;
Now his free spirit has the perfect light,
Here rests his mortal frame.

2. Of late years there have been wonderful strides made in the work of educating the human mind. Many systems of many educators have been carefully studied, investigated, and applied, and in each have been found ideas essential to the proper development of the intellect; but in Herbart's pedagogy the organizing principle is the development of character, and all the subordinate principles are mutually related and in practice contribute to the realization of this purpose. All other aims are subordinate to that which develops character; it alone is the true foundation without which the temple of the soul is built upon the sand. A system of pedagogy having character as its central thread will receive the most earnest and sincere attention and study prompted by the natural longing of the human heart.

3. Because if he does not he will get "lost in the wilderness." Not having any goal to reach or win, he will wander, and progress will be impossible. Only by having a well defined purpose to achieve, can he wisely choose the thing to do or say now. A star ahead directs the steps that reach it. The teacher who has a clear conception of the purpose of education can make his every word and act contribute to the achievement of that purpose.

4. The student by knowing Herbart's definition of education can note carefully his lines of thought that presumably converge to the central idea, and observe how truly, in his opinion, they serve their purpose. The importance of every idea advanced can be measured by noting its relation and connection with the organizing idea. If moral character-building is the chief aim it should have all other aims converging toward it, and at last centering in it, and the student can judge of the importance of every auxiliary aim by noting how much it contributes to the realization of the chief aim.

5. Moral character-building.

6. This definition of education is the only one that has in view the true happiness and welfare of the individual both here and in the hereafter. Without sturdy moral character, the individual is a menace to the well-being of society

7. The home, the street, the church, and society.

8. It differs in definitely setting forth right moral action as the chief thing we should instill into the child's daily life, rather than mental culture and knowledge.

READING.—1. Reading is the act, practice, or art of perusing written or printed matter and ascertaining or considering its contents or meaning. Oral reading is the art of uttering aloud the words. Silent reading is the art of gathering the ideas from the words by simply passing the eye along the lines.

2. By silent reading. This should prompt the teacher to practice her pupils frequently in silent reading and to urge them to special skill in this art.

3. With *Reading* as the basis we ought to teach, as correlated subjects, Spelling, Grammar, Composition, Rhetoric, and Literature.

4. Pupils should be led to see that certain pauses indicate clearness, and that others may be made for the sake of force. Let the teacher ask what part of the first line should receive special emphasis; a little investigation will reveal the fact that "to die" should receive special force, and that a short pause before it and after it will cause it to be presented to the attention forcibly. Another rhetorical pause should be made after "deathbeds."

Also lead the pupils to see that such pauses may occur at commas, thus lengthening the time that would naturally be given to the comma itself.

HISTORY.—1. The petroleum industry of the United States was in its beginning closely connected with coal, since it was the production of oils from bituminous coals which led the way to the utilization of the native mineral oils. In 1859, the oil wells of Venango County, Penn., were opened and forthwith the works erected for the distillation of coal were changed to petroleum refineries.

The chemical investigation of the crude material had already been committed to Prof. B. Silliman, Jun., and his report to the Penn. Oil Company, April, 1855, has been regarded as the first important movement toward the development of the immense industry of petroleum

that has since sprung up. The report described how the crude oil could be converted into several different products, one of which was a burning oil of great illuminating power. At this time the supply of petroleum was limited to that which could be gathered from the surface of the water. But, upon the discovery of the oil in the earth, in great abundance, wild excitement and speculation followed. It was soon discovered over quite a wide district in Penn., and in some places in Ohio, Virginia, Kentucky, Indiana, etc., and in a few years there was a general exportation of the several products to every part of the civilized world. American petroleum soon displaced the products of the whale fisheries. It has furnished employment to thousands of men, not only in getting it out of the earth, but in manufacturing tanks and barrels for holding it.

2. The resumption act, passed by Congress Jan. 14, 1875, provided that on Jan. 1, 1879, the secretary of the treasury should redeem in gold coin all bills of the United States which might be presented to the treasury. The credit of the Government was strong, the premium on gold had gradually disappeared, and when the holders of notes knew that they could get gold whenever they wished, very few cared to exchange for the heavy metal.

3. In some of the states the freed slaves were in the majority, and they were extremely ignorant, yet to them were committed the government of the states, the enactment of the laws, and other important matters with which they were totally incompetent to deal. The natural result followed,--they were made tools by designing men, many of whom came from the North with so little property with them that it was said it could all be put into a carpet bag. Hence they were called "carpet-baggers." Between these and the ignorant negroes the southern states fared badly, for money was squandered lavishly, and much that should have gone for public uses went into private pockets.

4. State debt assumption was one of Hamilton's measures about which he and his party felt much concern, for after it had passed the House, it had been reconsidered and defeated. Strange as it may seem, Hamilton sought aid of Jefferson, then Secretary of State, who agreed to use his efforts to effect the passage of the measure; for, he and his friends wished to secure the seat of the national government on the Potomac. With admirable strategy, Jefferson managed to have the situation discussed over a good dinner, to which he had invited the chief parties concerned. Before the party broke up, it was understood that Hamilton was to get enough votes to pass the assumption measure, provided he secured for the "Potomac" men enough votes to give them the locating of the seat of government.

And further, it seems to have been a complex case, the South consenting against its financial interest to the assumption of the State debts on the tacit understanding that Congress should turn a deaf ear to the petitions against slavery.

This is the first case of "log-rolling" in the history of Congress.

5 They were more democratic in 1800 than in 1850. In 1800, the few centralizing tendencies and monarchical ideas that had been interwoven with the machinery of the new nation by a few political leaders were fast disappearing, and a great majority of the people were welcoming the new order of things about to begin under Jefferson. The democratic spirit that prompted the first ten amendments to the Constitution was fast growing into a strong political power. Its extremists put forth the Kentucky and Virginia Resolutions, and its entire following gave Jefferson the presidency. At this time, had it been an issue, popular sovereignty as known about 1850, would have had an easy victory.

[Taking as a basis for the answer, the number of Tories in the country at each of these periods, one could arrive at the conclusion that by 1850, the Tories (or the friends of monarchy) had all been displaced by followers of democracy; and therefore in 1850 the percentage of people who were democratic was larger than it was in 1800]. But the *democratic feeling* in 1800 was much more intense than in 1850.

SCIENTIFIC TEMPERANCE—1. If alcohol is food its decomposition in the body should afford strength and heat after the same manner as other foods. But this is not the case. There is a certain determinable degree of saturation of the blood with alcohol within which degree all the alcohol is disposed of by its decomposition; beyond that degree the oxidation is arrested, and then there is an accumulation of alcohol with a voidance of it, in the unchanged state, in the secretions. The small amount that is oxidized, is decomposed into secondary products at the expense of the oxygen which ought to be applied for the natural heating of the body; and this interference with the normal production of heat, although it affords some heat itself, reduces the temperature of the body.

2 The "wine that would burn" spoken of by Pliny contained more or less of what we call common alcohol. Pliny wrote about 65 B. C., and knew nothing of pure alcohol, for the first experiments in distilling wine were made in the eleventh century A. D. From the eleventh to the seventeenth century, distilled wine was called "burnt wine," "strong spirits," or "spirit of wine;" the name alcohol was not given to distilled spirits until the latter part of the seventeenth century, yet the "wine that would burn" contained quite a large amount of it, as is proved by the statement of Pliny in regard to its effects which he says were, "blotched skin, purple nose, bleared eyes, and sleep agitated by furies."

3. The testimony of explorers in arctic regions proves that cold can be endured better without alcohol than with it. Persons under the influence of liquor frequently perish with cold. Users of strong drink are well acquainted with the *alcohol chill* that soon occurs, and a thermometer placed under the tongue will show that the temperature of the body is actually lowered.

4. Dr. Richardson says that alcohol may act in two ways on the

fibrin, according to the degree that it affects the water that holds the fibrin in solution:

(a) It may *fix* the water with the fibrin, and thus destroy the power of coagulation. This is why *drinkers are liable to bleed to death in case of accident*, and why under such a condition a *surgical operation might not be successful*.

(b) It may extract the water so determinately from the fibrin, even while in the blood channel, that it will produce coagulation. (In case of sudden death from a large dose of alcohol, the blood is sometimes found quite fluid. These varying effects are not yet fully explained.)

5. Their use is more dangerous because they contain a great amount of alcohol, and because of their capability of receiving more injurious adulterations.

6. The disastrous consequence in the individual—physical, mental, and moral—produced by drink may be and *are* most faithfully transmitted, not only to the children, but to the children's children as well. Sometimes the children of parents who are guilty of alcoholic excess come into the world as idiots. From such parents a child will inherit a weak will-power, a deadened conscience, and the craving of the system for strong drink or some kind of stimulant.

7. "Rum consumption" is the disease brought about by strong drink and is due to the effects of alcoholized blood upon the lung tissue. The general tendency of alcohol is to lower the vitality of the tissues, by changing their soft elastic condition to one that is hard and inelastic; the presence of alcohol is also irritating to the delicate membranes, and may cause inflammation and ulceration. Scientists say that the consumption produced by alcoholic drinks is incurable.

8. Tobacco alone causes an undue opening of the pupil, confusion of vision, bright lines, specks, and long retention of images on the retina. When adulterated as it is in the cigarette, with alcohol, opium, etc. the effects are more marked, and the injury to the nerves much greater, and a general failure of eyesight is the usual result.

PHYSIOLOGY.—1. (See p. 137, text book).

2. The origin and fate of the blood corpuscles are debated questions. The *red* may arise from certain colorless nucleated bodies in the blood, similar to, if not identical with, the white corpuscles of the blood; from the small nucleated corpuscles of the spleen pulp; or from the transitional cell-like forms seen in the red medulla of the large bones. The spleen is supposed to be the grave of many red corpuscles; and the breaking up of the corpuscles to form the biliary coloring matter, the end of others. The *white* corpuscles may arise from division of the colorless cell bodies, but more probably from the lymphatic glands and other adenoid tissue. Their function appears to be to give birth to the red corpuscles. (John C. Cutter). The white corpuscles act as the *scavengers* of the system, thereby ridding it of disease germs and certain impurities. (See page 83 of text-book).

3. A tendon is a hard insensible cord, or bundle of fibres, by which

a muscle is attached to a base. The tendon by which a muscle arises (*origin*) enables a large number of bulky, muscular fibres to act from a definite point of the skeleton, whilst the tendon of attachment (*insertion*) transmits the muscular force to some other equally precise point of bone. The tendons reflect the muscular force over the joints and other parts of the skeleton, as well as through loops; they economize muscular tissue, and they afford lightness and elegance, as is seen in the ankle and wrist. (See pages 74 and 75, text-book).

4. (a) Glands whose function is to eliminate waste products; as the *sweat* glands and the *kidneys*

(b) Glands whose function is to furnish a liquid to protect, moisten, or soften parts; as, the *sebaceous* and the *palpebral*.

(c) Glands whose function is to furnish the white corpuscles; as, the *lymphatic glands*.

(d) Glands whose function is to aid in digestion.

These may be placed in two groups—one comprising these glands that eliminate matter useful in some way to the system; and those that eliminate matter to be at once thrown off from the system.

5. (See pages 166, 167, 168, 169, text-book).

6. The spinal nerves are attached to the cord symmetrically, and emerge from the spinal canal by the intervertebral foramina, one on each side, between each pair of successive vertebrae. Each spinal nerve arises by an anterior and a posterior root, the latter being somewhat larger, and having a ganglion where it joins the anterior root, to make up the common nerve trunk. Immediately after its formation by the mixture of the fibres from both roots, the trunk begins to divide into branches for the supply of some region of the body. Each anterior root is *motor*; each posterior root is *sensory*.

7. Certain small portions of the bodily framework are competent to be affected in such a manner as to cause the sensations of taste, smell, etc. These very limited parts of the body, which put us in relation with particular kinds of substances, or forms of force, are what are termed *sense organs*. There are two such organs for sight, two for hearing, two for smell, and one for taste.

8. The *mammalia* are a class of vertebrates that have, in common with man, a backbone, lungs, diaphragm, etc., and organs that supply their young with milk.

9. Bicycle riding of itself is not so beneficial to the physical system as brisk walking. The action and position of the various parts of the body, in bicycling, are not such as to promote their uniform development, the legs are exercised unduly and unnaturally; and there is a tendency in most riders to contract round or stooped shoulders.

The advantages are the incidental or related features. The easy swift motion is enjoyable and exhilarating and many persons who would not otherwise do so are led to take physical exercise; but there is no degree or kind of health obtained from bicycle riding that cannot also be obtained from brisk walking.

GRAMMAR.—1. The structure of the sentence and the principles

and rules governing the established usage of language constitute the subject matter of grammar.

2. The elements are two (a) something about which to think; and (b) that about which the mind thinks concerning that thing. In the sentence, the subject corresponds to (a) and the predicate to (b).

3. Description, narration, exposition, and argumentation; to these some authors add *persuasion*.

4. As the study of grammar gives a knowledge of the principles and rules governing correct usage, such study will aid greatly in detecting and avoiding errors in language.

By imitating the speech of those who speak well, one can learn to write good English within certain limitations, but he is very apt to commit errors violating some of the rules of good English from the lack of knowledge of its rules and principles. Whenever a person who lacks a thorough working knowledge of the sentence has occasion to submit any of his composition to the public eye, he first lets it pass through the hands of an accomplished critic and scholar.

6. They respect his opinions if (as, for, because, since) he is wise and prudent.

7. "soft" is a predicate adjective; "breezes" is the subject of "are;" "that" is a relative pronoun, the subject of "play." "round" is a preposition, showing the relation of "tombs" to "play;" the antecedent of "that" is "breezes."

10. The boy writes. The boy writes neatly.

GEOGRAPHY.—1. Mathematical; physical; political. For definitions see text-book.

2. From lack of knowledge of the subject itself and of its importance.

3. Mathematical zones are determined by the inclination of the earth's axis; isothermal lines determine climate zones.

4. Such peninsulas have been easily accessible from the sea, and subject to favorable climatic influences, caused by their large extent of coast line. These advantages have contributed to the peopling of such countries and to their progress. Their being largely isolated from other countries has also been an advantage.

5. When told in an interesting style and when made up of the *very life* of the country, there is no better material for instruction in geography than such descriptions. For, about them, there are the elements of reality and vividness that enchain the interest; this done, and the acquisition of knowledge is the certain result.

6. A relief map shows an immense system of mountain ranges near the west coast and trending north and south.

7. (a). Ohio, Indiana, Illinois, Michigan, and Wisconsin. (b). The Ordinance of 1787. (Eastern Minnesota was also included).

8. St. Petersburg is situated on both sides of the river Neva at its influx into the Gulf of Finland. In locating it, Peter the Great was desirous of creating a "European" capital, a new Amsterdam, that is a meeting place for traders of all nationalities, and a great export

market for Russia. For much of Russia there is no other outlet to the sea, and when the city was begun there was no other, and trade had to be directed northward.

9. Havana, Cuba.

10. Petroleum, Coal, Natural Gas, Clay, building-stone, lime-stone, gravel.

ARITHMETIC.—1. (a). If one apple costs two cents, one-half an apple costs—cent. (b). If an orange costs four cents, one-half an orange costs—cents. (c). I gave an apple to some boys and gave each one-half an apple; how many boys were there? (d). I gave two apples to some boys and gave each half an apple; how many boys were there? (e). In three apples how many half apples?

2. Answer, \$96.

3. Interest on \$516.40, at 7% for 93 d. = \$9.338+; \$516.40 + \$9.338 = \$525.738+; bank discount of \$525.738 at 8% for 63 d. = 7.36; \$525.738 less \$7.36 = \$518.378+, answer.

4. \$1200 Indianapolis, Ind., Dec. 10, 1895.

Ninety days after date for value received, I promise to pay to the order of John Smith, twelve hundred dollars, with interest at 5 percent. per annum. Discounted Dec. 20, 1895, at 6 per cent.

The interest of \$1200 at 5% for 93 d. = \$15.50; \$1200 + \$15.50 = \$1215.50; the bank discount of \$1215.50 at 6% for 93 d. = \$16.814+; \$1215.50 less \$16.814 = \$1198.686, answer.

5. (a). Only like numbers can be added. (b). The sum is of the same kind as the numbers added. (c). The sum exceeds any of the numbers added. (d). If equals be added to equals the sums are equal. (e). The sum of two or more numbers equals the sum of their respective similar orders added separately.

6. By using object. For example take small sticks similar to matches, and have the pupil to count ten of them, and to tie them into a bunch; and then to count out another ten, and tie them likewise; and so on until ten bunches are made, which the pupil may be led to see make one hundred sticks, by counting them singly if necessary.

Now, have another bunch of *tens* tied up; then tie the ten *tens* into a single bunch, and place the big bunch (100), the small bunch (10) and a small stick (1) side by side on the table. Now, the pupil will readily see that ten *ones* make ten, and that ten *tens* make one hundred.

7. $20 + (\frac{2}{5} \text{ of } 20) = 28$; hence, 28 cts. = selling price, which is $\frac{7}{8}$ of the marked price; therefore, the marked price = 32 cts.

8. In board measure, the unit is a square foot, one inch or less in thickness.

In one sill, the number of board feet = $18 + 6 + \frac{1}{2} = 72$; in 6 sills, the number = 6 times 72 feet = 432 feet.

SHAKESPEARE (HENRY VIII).—1. Buckingham, Wolsey, Catherine, King Henry, Anne Boleyn, Cranmer.

2. Between 1529 and 1534.

3. Henry VIII of England and Francis I., of France.

4. Wolsey arranged a meeting at Calais between these two kings,

and *fetes* of such extraordinary splendor were given, that the place of the interview was called the, "Field of the Cloth of Gold." (See any good history of England or France).

5. There are *two* figures: 1st, "no man's pie" is *metaphor*; a desirable object or scheme is called a pie. 2nd, "his ambitious finger" is *synecdoche*; a prominent part (the finger) of the man is made to represent the whole man.

6. They were the leaders of opposing parties, and Buckingham became aware of Wolsey's scheming against him. (See page 65 of text-book).

7. See note 23, page 126.

8. See note 24, page 126. That learning with poverty is better than titles of nobility.

9. Cunning, hypocrisy, insolence.

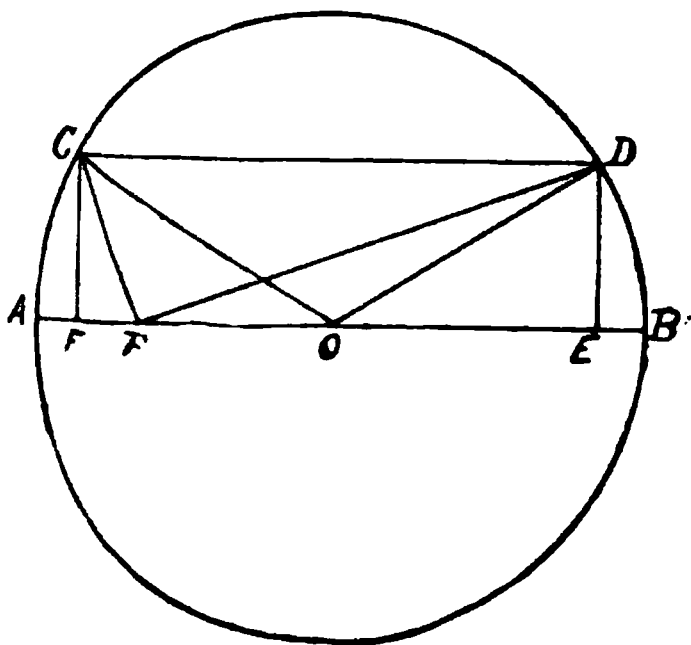
10. See page 104.

FOOD FOR THOUGHT.

[Send all communications to W. F. L. Sanders, Connersville, Ind. They should be received by Jan. 16. Be prompt.]

SOLUTIONS RECEIVED.

PROBLEM 100.



CD is a chord parallel to the diameter AB and P is any point in that diameter. Prove that

$$PC^2 + PD^2 = PA^2 + PB^2.$$

SOLUTION.—

FO = OE. From triangles PCO and PDO, we have,

$$PC^2 = PO^2 + OC^2 - 2PO \times FO, \text{ and}$$

$$PD^2 = PO^2 + OD^2 + 2PO \times OE$$

Therefore, $PC^2 + PD^2 = 2PO^2 + 2R^2$, (R = radius)

Again, $PA^2 = (R - PO)^2 = R^2 - 2R \times PO + PO^2$

and, $PB^2 = (R + PO)^2 = R^2 + 2R \times PO + PO^2$

Therefore, $PA^2 + PB^2 = 2R^2 + 2PO^2$

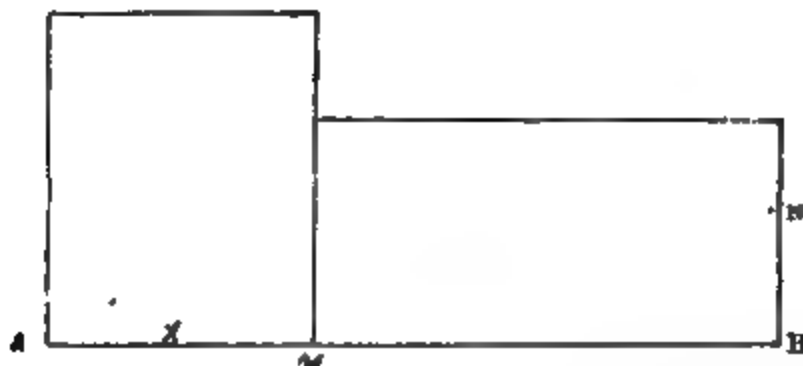
Hence, $PC^2 + PD^2 = PA^2 + PB^2 \dots \dots \dots$ Q. E. D.

(By J. C. GREGG, A. M., Brazil, Ind.)

72. It is required to divide a given line m into two segments so that the rectangle contained by one segment and another line n shall be equal to the square on the other segment.

(Proposed by J. C. GREGG, Supt. Schools, Brazil, Ind.)

SOLUTION.—



Suppose we have the given construction.

Let x = a side of the square, and $AB = m$.

Then $n : x :: x : m - x$
 $x^2 = n(m - x)$, from which we get $x =$

$$\frac{\sqrt{n^2 + 4mn} - n}{2}$$

x is now easily found by construction. Find the side of a square equal to the radical, decrease its length by n , and bisect the remainder.

(By WM. PARKINSON, Lafayette, Ind.)

PROBLEM 103. A man arrived at the railroad station nearest to his house $1\frac{1}{2}$ hours before the time at which he had ordered his carriage to meet him. He sets out at once to walk at the rate of four miles an hour, and meeting his carriage when it had traveled eight miles, reached home exactly one hour earlier than he had originally expected. How far is his house from the station, and at what rate was his carriage driven? (Prepared by GEO. DOWNS, Purdue University.)

SOLUTION.—

Let x = distance walked by the man, in miles.

y = time it takes the carriage to travel a mile.

$1\frac{1}{2}$ h. — 1 h. = $\frac{1}{2}$ h. lost by walking.

We now derive the equations:

$\frac{x}{4} - xy = \frac{1}{2}$, and $\frac{x}{4} + xy = 1\frac{1}{2}$; from which we get $x = 4$ (miles), and

$y = \frac{1}{8}$ (h.). The value of y shows the rate of the carriage to be 8 miles per hour. As the man walked 4 miles, and the carriage had come 8 miles, the distance is 12 miles.

(By RALPH CHADLER, Frankfort.)

PROBLEM 104. Three boys went to town with eggs. The first had 10, the second 30, the third 50. They sold at the same price and received the same amount of money. What was the price?

SOLUTION.—To solve such questions one must find a rate for a certain number, and another rate for each single egg over. By inspection we perceive that one price that satisfies the conditions is 7 eggs for 1c., and 3 cts. apiece for each remaining egg.

Then 10 eggs would sell for 1c. + 9c. = 10c.

30 " " " " 4c. + 6c. = 10c.

50 " " " " 7c. + 3c. = 10c.

(By KITTY SHATTUCK, La Grange, Ind.)

J. W. Robbins, Alexandria, Ind., has it as follows:—The price is 2c. per dozen and 1c. apiece for each remaining egg.

Then 10 eggs would sell for 10c.

30 " " " " 4c. + 6c. = 10c.

50 " " " " 8c. + 2c. = 10c.

PROBLEM 105. A man has \$4,100 which he invests in 3 per cent. stock at 87, and 5 per cent. stock at 104; what sums must he invest in the respective stocks to make $3\frac{1}{2}$ per cent on the whole?

SOLUTION.—

3 per cent. stock at 87 will pay $3\frac{3}{4}\%$ per cent.;

5 " " " 104 " " $4\frac{9}{8}\%$ "

$3\frac{3}{4}\%$ is $\frac{3}{8}\%$ less than $3\frac{1}{2}\%$;

$4\frac{9}{8}\%$ is $\frac{3}{8}\%$ more than $3\frac{1}{2}\%$;

$\frac{3}{8}\%$ is $25\frac{1}{5}$ times as much as $\frac{3}{8}\%$;

$26\frac{1}{5} : 25\frac{1}{5} :: 4,100 : 3,944$;

$26\frac{1}{5} : 1 :: 4,100 : 16$;

He invests \$156 in the 5 per cent. stock, and \$3,944 in the 3 per cent. stock. (BY WALTER N. VANSOYOC, Crawfordsville.)

After finding the 39 and the 986 (see above), the process might be as follows: $39 + 986 = 1,025$; $1\frac{3}{8}\% \times 4,100 = 156$; $10\frac{9}{8}\% \times 4,100 = 3,944$.

SOLUTIONS REQUESTED.

PROBLEM IV. [Page 250, Indiana Complete Arithmetic.]

The debit side summarized is as follows:

Reckoning from Sept. 1, we have,

Int. on \$600 for no days — 0.

" " \$500 " 20 d. — Int. on \$10,000 for 1 d.

" " \$600 " 80 d — " " \$48,000 " "

" " \$300 " 70 d. — " " \$21,000 " "

\$2,000

\$79,000

The interest on the several amounts for the several periods — the interest on \$79,000 for 1 d.

The credit side summarized is as follows:

Int. on \$500 for 20 d. = Int. on \$10,000 for 1 d.

" " \$600 " 24 d. — " " \$14,400 " "

" " \$400 " 30 d. — " " \$12,000 " "

\$1,500

\$36,400

The interest on the several amounts for the several periods — the interest on \$36,400 for 1 d. Balancing the amounts we have \$500. Balancing the interests we have \$42,600 for 1 d., which is the same as \$500 for $85\frac{1}{2}$ d. $85\frac{1}{2}$ d. after Sept. — Nov. 26.

PROBLEM 41. [Page 283, Complete Arithmetic.]

Of *pasture*, there were 5 sheep to 1 acre,

or 1 " " $\frac{1}{5}$ "

Of *plowed ground*, there were 8 sheep to 1 acre,

or 1 " " $\frac{1}{8}$ "

Then, for 1 sheep there must be $\frac{1}{5}$ A. + $\frac{1}{8}$ A. = $\frac{13}{40}$ A.

There can be as many sheep as the number of times $\frac{13}{40}$ is contained in 325, or 1,000 times; therefore 1,000 sheep can be kept on 325 A. of

which there are 200 A. pasture (1,000 times $\frac{1}{5}$ A.); and 125 A. of plowed ground (1,000 times $\frac{1}{8}$ A.).

CREDITS.—103, Alton Blunk, Crown Center; Ralph Cheadle, Frankfort; 104, J. W. Robbins, Alexandria; Kitty Shattuck, La Grange, Will E. White, Alamo; 105, Walter S. Vanscoyoc, Crawfordsville; 100, J. C. Gregg, A. M., Brazil; 72, William Parkinson, Lafayette; 105, Geo. Osthimer, Connersville, Ind., (his solution is by Algebra); 98, 103; Edward Gardner, Lotus, Ind.; 103, 105, I. S. Morse, Crumstown; 98, John Morrow, Charlestown, Ind.

QUERIES.

- 13 Why is the northern boundary of Delaware arched?
14. Explain why certain cities in Canada are represented on the map with the letters Ho. following them.
15. Explain the paragraph commencing, "On the snow white sides of the mountain etc.," page 17, Complete Geography.
16. Explain the Venezuela affair, and state how the United States is affected by it.
17. When did New Hampshire become a royal province? (13, 14, 15, 16, 17. SUBSCRIBER, English Lake, Ind.)
18. Do the people living on the east side of the international date line have the same day of the month as those living on the west side? (SUBSCRIBER, Argos, Ind.)
19. Is it possible to get the exact dimension of a square acre of ground? If so, what is it? (E. C., Stanley, Ind.)
20. "Discuss nerve energy and nerve waste, giving copious illustrations throughout your discussion." (From list of questions used in October; several subscribers respectfully request the proposer to give through this department what he would consider a fair answer to this question, and also to please state from what book or books definite information on these subjects can be found.)
21. Suppose Rhode Island and North Carolina had not come into the Union voluntarily, what would have been the out come, or result? SUBSCRIBER, Richmond.

PROBLEMS.

106. A line AB is divided equally at O and unequally at P; to prove that,

$$AP^2 + BP^2 = 2AO^2 + 2PO^2$$
107. There is a Quaker we understand,
 Who for three sons laid off his land,
 And made three equal circles meet,
 So as to bound an acre neat.
 Just in the center of that acre
 Is found the dwelling of the Quaker;
 In centers of the circle round,
 A dwelling for each son is found:
 Now can you tell by skill and art,
 How many rods they live apart?

108. \$71400 of stock paying $5\frac{7}{8}\%$, at $137\frac{1}{8}$ is transferred to stock paying $9\frac{1}{2}\%$, at $218\frac{3}{4}$. Find the change in income. (Brokerage $\frac{1}{4}$ in each transaction.)

109. I wish to purchase a 5 per cent. bond so as to make the investment yield me 7 per cent.: how much can I pay for the bond, including brokerage at $\frac{1}{2}$ per cent? (Ind. Comp. Arith., p. 282, ex. 36).

Submitted by M. G. FINCH, Portland, Indiana.

110. A clock set right at noon indicates 3 minutes past 6 at 6 o'clock; at what time does it indicate 6 o'clock?

111. Given the hypotenuse and one leg of a right angled triangle equal to 353 and 272, to find the remaining leg without squaring the given numbers. Loomis's Geometry, page 133.

(E. E. TOWNSLEY, Coal Creek, Ind.)

The proposer of problem 95 (stated in the Oct. JOURNAL and solved in the Nov. JOURNAL) says that the statement should have been, "Inscribe a square in a given sector." In the solution the square touches the sector at three points. Now let our readers send us a solution in which the square touches the sector at four points.

Solutions of problem 98 will appear in Feb. JOURNAL.

MISCELLANY.

TRANSFERS FOR SCHOOL PURPOSES.

The Supreme Court has just handed down an opinion upon the question of transfers for school purposes that will settle all disputed points that have agitated the minds of school officers for a long time. The case came up from Miami Co., where the city of Peru refused to admit into their schools, owing to their crowded condition, the children of parents properly transferred to the city for school purposes. The opinion is very full and complete, and discusses in a masterful way the whole question of school transfers; a summary of which is here given:

First; That a person who can show to his school trustee that he will receive better school accommodations ("better accommodations" may include more convenient distance, better roads, better gradation, etc.) in other school corporations, is entitled to transfer.

Second; It is the duty of the school trustee, of whom transfers are asked, to decide the question. His decision being subject to an appeal to the county sup't, whose decision in the matter is final. Either the person asking the transfer, or the school trustee to which the transfer is made, has the right to ask for an appeal to the county sup't within thirty days after the notice of transfer is given.

Third; Transfers are given only for the next school year. In other words, the conditions may change so as to make it absolutely imperative that transfers be made annually. We think this is an excellent view of the case taken by the Court, and will obviate so many difficulties

that have come through failure to transfer, after the conditions for which the transfer had been made, ceased to exist.

Fourth; The only thing to be determined is the question of "better accomodation."

This decision coming at this opportune time will make it possible for the school trustees, throughout the state, to readjust all of the school transfers at the time of taking the enumeration, which must now be taken between the 10th and 30th day of April each year. The county sup't will certify to the county auditor, each year, the list of persons transferred for school purposes, which record is binding upon all the school corporations.

When taking the enumeration next Spring, township trustees should see to it that all persons, heretofore transferred, understand this matter, and give them an opportunity to apply for transfer, if they so desire, at the time of taking the enumeration in April.

The above synopsis of the decision and the comments and suggestions are made by State Superintendent Geeting.

THE La Fayette high school has enrolled this year 850 students.

RUSH COUNTY has organized a teacher association with more than one hundred members.

AS ANNOUNCED last month, the National Educational Association will hold its next meeting at Buffalo, N. Y., July 7, 11.

THE teachers of Rock Creek township, Bartholomew County, held a big meeting at Grammer, Dec. 21. The program was an attractive one.

KOKOMO.—The school board has resolved to erect a new high school building and two ward buildings in time for the opening of the schools in September, 1896.

THE Hope Normal and Business school is reported in good condition Geo. W. Thompson, formerly of the State Normal, is at the head of the normal department.

THE Southern Indiana Normal at Mitchell, reports decidedly larger classes than were present in corresponding term last year. The work is moving on smoothly and the prospects for the future are flattering.

DEBOIS COUNTY Sup't Geo. R. Wilson, in order to help along the study of the Constitution of Indiana in the teachers' associations, has sent out "General Circular No. 73," in which are 270 suggestive questions.

C. J. BROWN, of Union Mills, as chairman of the village and common school section of the Northern Teachers Association, asks for suggestions and topics for discussion, in making a program for the next meeting. Write him.

MADISON.—All reports from Madison are to the same effect, viz: that the new superintendent, T. A. Mott is doing excellent work. Sup't

Geeting, F. A. Cotton and one or two other good judges who have recently visited these schools speak of them in very complimentary terms.

THE Funk & Wagnalls Company celebrated on November 27th, the anniversary of the completion of their "Standard Dictionary," by putting to press the 90th thousand of this work. This is a very large number of dictionaries to print in a single year.

EVANSVILLE.—Sup't Hester reports that his schools are badly crowded and that teachers have more pupils than they can manage well. As Mr. Hester usually gets what his schools need, it is fair to conclude that in due time ample provisions will be made.

THE National Superintendents' Convention will be held at Jacksonville, Fla., Feb. 18, 19, 20. It offers one of the best programs ever published, and many of the best men of the country will read papers. L. H. Jones, now of Cleveland, is president and is largely responsible for the program. Indiana should be well represented.

"INDIANA DAY" is always celebrated at the State Reform School for Boys. The anniversary of the admission of Indiana into the Union, December 11 is the date chosen. The last was the 79th anniversary and was made an occasion to be remembered by the boys. Sup'. Charlton never lets an opportunity pass unimproved to teach patriotism.

MADISON COUNTY at its annual association pursued a course out of the usual line. It secured two instructors, J. A. Bergstrom, Prof. of Pedagogy, I. A. and Mrs. Carrie B. Adams of Terre Haute and these two persons did all the work for the two days. In this way can be secured connected work, and there can be concentration on a few subjects.

SHERIDAN has recently dedicated a new school building, which is a model. President J. A. Joseph, of the Central Normal, made the principal address of the occasion. About \$500 have been raised principally by subscription, with which to start a school library. These things indicate an excellent educational spirit. M. H. Stuart is principal of the schools.

THE Daviess County Association held a successful meeting November 28-29. All the townships were well represented. Every progressive teacher in the county enrolled. The success of this, the first county association, is due in a large measure to the untiring efforts of Sup't Wallace. Daviess county schools will not take a single backward step while he is superintendent.

EDWARD S. AYERS, superintendent of the La Fayette schools, as chairman of the executive committee for the Northern Indiana Teachers' Association, reports that he has secured A. W. Edison, of the State Board of Education of Massachusetts, and Chas A. McMurry, of the Illinois State Normal school, to be present and do work for the association at its next meeting.

NEW ALBANY.—The school board has started out to renew and put in first class order all the school buildings. It has recently equipped

with new seats, desks for teachers and apparatus, two buildings. It has also reseated two high school rooms. The nucleus of a good working library has been started and all school interests are in a prosperous condition. W. H. Hershman is superintendent.

HO FOR JACKSONVILLE.—Just as we go to press word reaches us that the railroad authorities have made a rate of one and one-third fares for the round trip to the National Superintendents' Convention to be held in Jacksonville, Florida, February 18. Tickets will be good from about February 15 till three days after the close of the convention. The round trip from Indianapolis, under this arrangement, will be \$31.55.

THE Farmers' Reading Circle, of Indiana, should do for the farmers what the teachers' reading circle is doing for the teachers. The books for this year are Bailey's Talks Afield about Plants and the science of plants, \$1.00, and Franklin's Autobiography, 40 cents. These books are published by Houghton, Mifflin & Co., Boston, but can be had at the prices named, prepaid by addressing the secretary, H. F. McMahan, Fairfield, Ind.

THE National Herbart Society for the Scientific Study of Education was organized in Denver at the late meeting of the N. E. A. Its purpose is to study and investigate and discuss important problems in education. Its members do not subscribe strictly to the doctrine of any one leader, but seek for fair and thorough discussion. Some members of this society are strongly tinctured with the educational doctrines of Herbart, others are not, and it is right to expect an honest search for truth.

The society was organized for the aggressive discussion and spread of educational doctrines, and it desires to draw into its membership all teachers, students of education, and parents who wish to keep abreast of the best thought and discussion. A plan has been formed for organizing local clubs for the study of educational doctrines. For circular giving full particulars, address the Secretary Chas. A. McMurry, Normal, Ill.

THE school enumeration blanks are now ready for distribution. As a blank must contain the names of all the children in the township it is very large. It contains seventy inside large legal cap pages. The first outside page contains full notes and directions by the state superintendent. On the last outside page is printed the school enumeration law. The purpose of this law and this blank is to prevent all fraud in the enumeration and to secure accuracy.

THE National Herbart Society has just published a supplement to the Year Book. This supplement contains the debates on the Year Book at the Denver meeting. Special terms are offered to those persons who wish to form local Herbartian clubs. The society also offers a plan for organizing and conducting clubs for purposes of reading and the study of education. Those desiring to form a class, or to enroll themselves as members of the National Herbart Society should address

CHAS. A. MCMURRY, SEC., BLOOMINGTON, ILL.

EFFORTS are being made throughout America to celebrate Washington's birthday in a patriotic manner. To this end a uniform program has been prepared by A. W. Elson & Co., 146 Oliver St., Boston, which is to be used in the public schools of every state in the union. The matter for this program is original, patriotic, and unique. On receipt of four cents in stamps they will send it to any address; also, for an additional two cents, an eight-page copy of musical selections which accompanies the program. The words and music are original, and are written for this special occasion.

COMMISSIONING HIGH SCHOOLS.—State Sup't Geeting on behalf of the State Board has sent out a circular in regard to commissioning high schools. It is proposed to raise the standard and make more definite requirements in the future. Hereafter in order to secure a commission, a school must have a course of at least 30 months after the 8th grade has been completed; it must do the equivalent of a given sample course; the whole time of at least two teachers must be given to high school work, and the work must be satisfactory to the State Board. There are now 121 commissioned high schools in the state.

PURDUE UNIVERSITY.—The restoration. It will be remembered that in January, 1893, Purdue dedicated with much ceremony and not a little pride one of the best equipped civil engineering laboratory buildings in the country. The building cost \$170,000. In four days after, the building and outfit were destroyed by fire. Owing largely to Pres. Smart's energy, pluck and indefatigable work, a new building, better than the old one and better equipped than the old one, was dedicated December 4, 1895. The perseverance that accomplished this great work is making Purdue one of the leading schools of its class in the country.

LIGONIER.—W. A. Beane, principal of the high school, had his school celebrate Indiana Day, and used the following program which is certainly a good one:—Song—To Thee, O Country; Oration—Historical Sketch; Recitation—Indiana; Oration—Natural Resources; Recitation—Knee Deep in June; Oration—Effects of Battle of Tippecanoe; Song—Indiana; Recitation—Patriotism; Oration—School System; Recitation—The Chariot Race; Oration—Charitable and Penal Institutions; Song—America. The words "Indiana" go nicely to the music "Columbia's Pride."

INDIANA UNIVERSITY.—The University was quite well represented at the County Teachers' Associations the last week in November. The following persons gave evening lectures: Prof. Fetter of Economics at Rensselaer; Prof. Hoffman of Greek at Martinsville; Prof. Bryan of Philosophy at Muncie; Prof. Bergstrom of Pedagogy at Anderson; Prof. Sampson of English at Salem; Prof. Foley of Physics at Vincennes; Prof. Aley of Mathematics at Spencer; Prof. Woodburn of History at Princeton.

Preparation is already being made for the summer school. No pains will be spared to make this year's session the best. Of the *nine*

departments offering courses, the work is *seven* and probably *eight* will be given by the heads of the departments. The length of the term is increased from five to six weeks.

PERSONAL.

A. M. TAYLOR has charge of the Glenwood schools.

O. L. VORIS is serving his sixth year as principal of Centreville.

PROF. W. E. HENRY of Franklin College, did work in the Rush Co. association.

L. J. McCONNELL and wife of Kendallville have entered Hiram College, Ohio, with the view of taking a full college course.

W. B. FLICK, superintendent of Marion county, had nearly 1,000 bushels of winter apples to sell from his own orchard last fall.

O. P. MCAULKY, of the Northern Indiana School faculty, is just recovering from a severe attack of sickness. He has taught none this school year but hopes to begin work next term. His many friends will be glad to learn that he will soon be himself again.

PRES. DRAPER, of Illinois University, was present at the dedicatory exercises at Purdue University, December 4, and made an address which those present will not easily forget. Pres. Draper makes friends wherever he goes.

JESSE H. BROWN, recently and for many years supervisor of drawing and allied subjects in the Indianapolis schools, has prepared an illustrated entertainment entitled "What everybody should know about drawing." It is fully illustrated by large, off hand, graphic sketches in charcoal and colored crayon and is a new, fresh entertainment, highly instructive as well as entertaining, amusing and pathetic. Those wishing an entertainment should call on or address Mr. Brown at 421 Broadway, Indianapolis.

BOOK TABLE.

I. A. MELENDY, teacher of English grammar and Greek in the Tri-State Normal at Angola, has issued a "Hand book of Diagraming," which is concise, complete and yet simple. It "compels the pupil to think not only *what* a term modifies, but *how*." It shows at a glance the *kind* of modifier.

GOLDEN GLEES—Just out. This is the prize book. It was written by the best day school teachers of music, in competition for cash prizes. It contains a hundred and sixty pages and a single copy costs thirty-five cents. Prof. S. C. Hanson, of Williamsport, is one of the authors and has this and many other excellent music books for sale.

MASTERPIECES OF AMERICAN LITERATURE is the title of a new book by Houghton, Mifflin & Co. The book itself is a "masterpiece" of its

kind. The selections are from Irving, Bryant, Franklin, Holmes, Hawthorne, Whittier, Thoreau, Lowell, Emerson, Everett, Longfellow &c including the best prose and poetry. There is given also a portrait and biographical sketch of each author. Price, \$1.00

THE EVOLUTION OF THE MASSACHUSETTS PUBLIC SCHOOL SYSTEM.—A historical sketch by Geo. H. Martin. New York; D. Appleton & Co. This is the 29th volume in the International series edited by U. S. Commissioner, W. T. Harris. When one reads the title and then knows the editor and publisher, he is ready to take the rest on trust. Massachusetts has always stood in the front rank of all the states educationally, and the history of her school system is in part the history of every state system. Every student of Pedagogy should read it.

THE December number of *Harper's Magazine* presents a holiday appearance in its cover of white, gray and gold, and the illusion is not dispelled by an examination of the contents, beginning with a frontispiece in color. This frontispiece is one of twelve illustrations of a series of four sketches by Howard Pyle, with which the Number opens. Rarely has *Harper's* been embellished with more beautiful pictures than these and they are worthily succeeded by the work of Frederick Remington, Albert E. Sterner, W. T. Smedley, J. R. Weguelin, F. V. Du Mond, R. Caton Woodville and other illustrators of the Number.

THE TRAGEDY OF MACBETH and **PARADISE LOST** (two books) are two additions to the Eclectic English Classic series, published by the American Book Co., New York, Cincinnati and Chicago. These books are uniform in size and binding with preceding volumes of the same series. The notes are at the bottom of the page, and an introductory chapter gives a history and outline of each poem. The movement on the part of this great publishing house to place standard literary works in the hands of growing boys and girls cannot be too highly commended. Price of each, 20 cts.

STORIES OF GREAT AMERICANS FOR LITTLE AMERICANS is a supplementary book for children in the second reader grade. These stories were written by Edward Eggleston. We find among those included as *Great Americans* not only the names that belong to that class without a shadow of doubt, but also the names of some others whose life gives them a prominent place in this class, but who have hitherto remained in the back-ground. We are glad boys and girls will have an opportunity here to learn about Dorothy Dix and Louisa Alcott, as well as about Benjamin Franklin, Daniel Boone, Kit Carson et al. American-Book Co., New York, Chicago, Cincinnati. Price, 40 cts.

THE issue of *Harper's Bazar* for December and January will be extremely rich in elegant and distinguished fashions for the winter. Visiting and reception gowns and outdoor costumes in great variety will appear with full descriptive details. Katherine De Forest, in "Our Paris Letter," will give the earliest hints of coming changes, and keep the readers informed of what people are doing in Paris.

LITTELL'S LIVING AGE, the greatest eclectic magazine of the world, has reduced its price from \$8. to \$6. This magazine is a weekly and gives more good reading for the money than any other publication of its class. See advertisement in December JOURNAL.

THE KINDERGARTEN MAGAZINE for December is a beautiful number. The frontispiece is a picture of Bonveret's Madonna. The opening article is a fine tribute to Eugene Field, the "children's laureate and psalmist." Quotations from leading writers in our country testify that the country recognizes in the death of this modest newspaper man, a *national loss*. The Chicago School Board expresses the determination to name one of its school buildings after Eugene Field. Kindergarten Magazine is a *monthly*, published by Chicago Kindergarten Co., Price \$2.00.

A NEW biography of George Washington, by Professor Woodrow Wilson, of Princeton, will be a feature of *Harper's Magazine* during 1896. The first paper, which appears in the January number, treats of the conditions of the colonies, with special reference to Virginia at the time of Washington's birth. The paper is fully illustrated.

THE GRAY MAN, a new serial story by S. R. Crocket, will be published in *Harper's Weekly*, beginning in January. During the current month, or in the immediate future, the *Weekly* will contain illustrated articles describing the Venezuelan boundary dispute, of the troubles in Turkey, of the rebellion in Cuba, and of the Japanese acquisition of Formosa. There will also be noteworthy papers on domestic subjects--on the notable features of the Great West, by Julian Ralph; and "Debt and Valuation," an important paper of national interest by J. K. Upton.

NO. 83 RIVERSIDE LITERATURE SERIES is a double number and contains George Elliot's *Silas Marner*. No. 84 contains *Dana's Two Years Before the Mast*; and No. 85 contains *Tom Brown at Rugby*. The two latter are quadruple numbers. They can all be secured bound in paper or linen. The linen editions are neatly bound, printed in clear type, on excellent paper. They would be suitable for any library. The double numbers bound in linen can be purchased for 40 cts; and the quadruple numbers similarly bound cost only 60 cts. Houghton, Mifflin & Co., Boston, Publishers.

THE FIRST SCHOOL YEAR.—By Katharine Beebe. The Werner Company, Chicago. The several chapters of "The First School Year" appeared as a series of articles in "*The Kindergarten Magazine*" for 1894. They were written for primary teachers especially that they might be helped to a clear idea of Froebel's principles and thus enabled to carry them into every-day school work. Miss Beebe is a forceful writer, and thoroughly believing all she says, makes a strong plea for kindergarten methods. She makes the following appeal in her chapter on science work: "So, whatever you do or have left undone, O busy teacher, go to work to master your subject, whatever it may be that you may have the interest that will breed interest in the child, and

the sympathy that will draw his whole self to you as you walk in the path of study together." It certainly is an inspiring work for every primary teacher.

MANUAL OF MYTHOLOGY.--By Alex S. Murray, Department of Greek and Roman Antiquities, British Museum. *Philadelphia: David McKay.* This book is a revised and corrected edition of Murray's *Manual of Mythology*, a most popular English work, published some years ago. It is an attractive book, with its illustrations and its beautiful, clear print. Ten full page engravings, taken from the photographs of antique works of art have been added to the new edition and all the cuts of the old edition of Murray have been carefully examined, some of them rejected as representing only modern ideas of the mythological subjects, and many others replaced by engravings made from photographs of the originals of early Greek art recently discovered. An additional improvement to this new edition is genealogical tables showing the relationship of the gods and goddesses. A knowledge of Classical Mythology is absolutely necessary to the appreciative understanding of many of the masterpieces of English literature. As an aid in this, references to the works of the poets who have made use of the old myths have been added and occasionally extracts from their poems. Price \$1.25.

STORIES OF COLUMBIA.--By Will H. Glasscock. Published by D. Appleton & Co., New York. The several stories of Columbia in this book are told in a simple, straightforward manner, attractive alike to old and young. Here is the story of Columbus in his prosperity, pleading before the king and queen of Spain; and again the sadder story of his poverty and imprisonment. The characterization of the red man in his native forests, of the puritan in his bleak New England home, of the sons and daughters of the revolution is excellent, because truthful. The book fittingly closes with recounting the names and inventions of American men of genius to whom the world owes a lasting debt. Such names are recounted as Elias Howe, the inventor of the sewing machine; Robert Fulton, inventor of the steam-boat; Eli Whitney, inventor of the cotton gin; Cyrus McCormick, inventor of the reaper; Thos. A. Edison, inventor of the telephone the phonograph and electric light; S. F. B. Morse, inventor of the telegraph. Lee O. Harris, our own Indiana poet, has written an appropriate stanza for the heading of each chapter. Prof. Glasscock, the author, formerly deputy superintendent of public instruction, now superintendent of the State Institute for the Blind is, also an Indiana man, and one of whom the state should be proud.

ONE HUNDRED LESSONS IN NATURE ABOUT MY SCHOOL-HOUSE. (E. L. Kellogg & Co., New York and Chicago. Cloth 201 pages. Price, \$1.00. This is the title of a little book by Frank O. Payne, written while teaching in Chatham, N. J. It cannot but attract attention for it deals with the nature right around the children. There is a chapter on Leaves, Plants, and Fruits; the next on Animals, in which the

beetle, butterfly, bee, wasp, ant, dragon-fly, fish, and clam are studied. The skeletons of animals are discussed; and the method of setting up the skeleton of a dog or sheep is explained. "What can be found under a flat stone," and "Walks with the children" form very interesting suggestive reading. There is a widespread demand for books that explain the nature right here—the nature that confronts the children as they assemble at the school-house, and this is one that attacks this very problem. It cannot but be helpful to every teacher, whether he gives lessons in nature or not. Mr. Payne has certainly shown that he comprehends the main problem by taking the things, plants, and animals, that every school child needs to know something about, because they are constantly before him.

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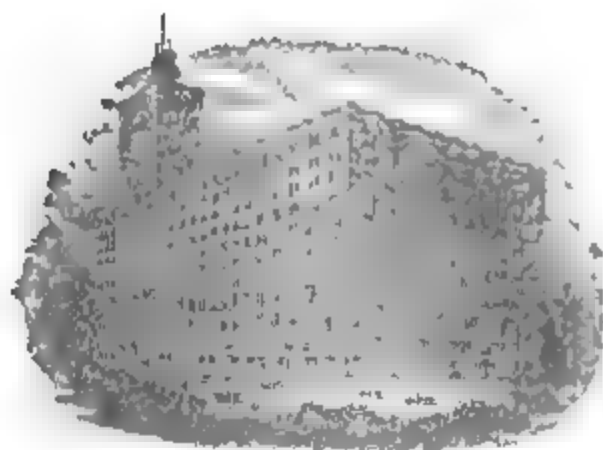
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STATE TEACHERS' ASSOCIATION—REPORT.

On the evening of Dec. 26, 1896, in the Hall of Representatives, State House, the forty-second annual session of the Indiana State Teachers' Association was called to order by the retiring president, Dr. Joseph Swain, president of Indiana University. The program opened with vocal music by twenty young ladies of Indianapolis, under the leadership of Mrs. Perle Wilkinson, supervisor of music. Devotional exercises were conducted by Rev. Henry A. Buchtel, pastor of Central Avenue M. E. Church of this city. The retiring president of the Association introduced his successor in the following brief and fitting address:

I congratulate the people of Indiana that their representatives, as early as 1816, declared their intention to provide by law for the general system of education, ascending in regular gradation from the township schools to the university. This great system, feeble in its beginning, has grown with the years in importance and usefulness. Much has been done, but past achievements only serve to emphasize the needs of the present, and the possibilities and obligations of the future. Among these needs and possibilities are greater opportunities for the training of teachers to supply the demands of our system. I congratulate this annual gathering of the teachers of Indiana upon having chosen as their president a man who, as much as any other in our state, stands for the professional training of the teacher.

Thanking you for your uniform courtesy and helpfulness to me in my duties as presiding officer a year ago, and bespeaking the same thoughtfulness toward him who puts on the harness as you have shown him who takes it off, I now deem it a privilege and an honor to introduce to you the vice-president of our State Normal school, president-elect of the State Teachers' Association of Indiana, Prof. Howard Sandison.

After expressing his appreciation of the honor conferred upon him, and asking forbearance and aid of the members of the Association, President Sandison delivered his inaugural address. His theme, developed in clear, broad, scholarly lines, characteristic of the speaker, was

THE CORRELATION OF INSTITUTIONS.

In E. B. Taylor's *Anthropology* a significant story occurs. It is a Hindu myth of the sunrise. On its spiritual side it symbolizes the sunrise of a new idea. The story runs in this wise: "Vamana, a tiny Brahmin, once came timidly to King Bali and begged as much sand as he could step over in three strides. The boon was granted. Thereupon the tiny Brahmin, quickly expanding into the gigantic form of the mighty Vishnu, stepped in one stride across all the earth, in another over all the sky, and in the third beyond all the air, thereby driving King Bali down into the infernal regions. In like manner, in time's course, there arose in Europe a tiny principle. Not tiny in itself but in its first appearing. It became known at Jena as *correlation*, and at Blankenburg as *inner connection*. After a slow growth and a precarious success it crossed the ocean. Passing Sandy Hook and Castle Garden it stood timidly before Isolation—that King in American schools. It begged as much space as it could compass in three strides. As of old, the boon was granted. Expanding into the mighty form of Unity, it moved with one stride to the Great Lakes and claimed its true position at the Convention of Superintendents in Cleveland. In the second stride it passed beyond the Mississippi to Denver and made its presence felt in the great National Convention. In its third stride it reached the Golden Gate.

Its hour was, indeed, at hand. Through many ages nature, art and man's institutions existed to the minds of men as a fused whole; as a one, as a somewhat whose differentiations were but dimly felt. In this stage of thought the world while a one was not a true unity. God and nature were not distinct. Body and soul were not discriminated. The elements of morals and religion, of sin and crime, were but faintly apprehended. Guilt, whether intentional or unintentional, was merely guilt. Uzzah touched with his hand the ark of God to preserve it. Death came upon him as if his act of irreverence were intentional. (11 Samuel, 6th chapter, 6 and 7.) This stage, in which thought sees undifferentiated unity, fused wholes, is fitly hinted in Emerson's Hymn of Brahma:

"If the red slayer think he slays,
Or if the slain think he is slain,
They know not well the subtle ways
I keep and pass and turn again."

This was the age of vagueness; the age where boundaries were dim. It is symbolized by the Sphinx, a something neither human nor animal, gazing off into vacancy. To every single human being, as to the race, this stage must come and must come first.

Out of this period in which all differences are illusions man passed into a period of differentiation. This, too, is natural. It is the necessary outgrowth of man's analytic function; of his distinguishing activity. Under this spirit the hitherto undifferentiated whole became merely an aggregation of isolated objects, arts and institutions. Discriminations multiplied. Each distinction became the ground for still further distinction. Grace did not exist as some unified state; it was analyzed into grace prevenient, grace operant and grace perfect. Angels were not permitted to be a single group entitled to heaven. A nine-fold differentiation occurred, and the Heavenly Host became angels, archangels, principalities, virtues, dominions, powers, thrones, cherubs, seraphs. The thinking of this age culminated in the minute distinctions of the scholastics. The reign of isolation did not, however close with them; its hold is still upon us. Distinction is a true stage of thought. It is the second movement in the spiritual unfolding of an individual as well as of the race. It is a means, however, not an end.

With certain leaders in thought the final stage had begun long ere

the second reached its culmination. The unity of the one and the many was the familiar and ever-present problem of Socrates, Plato and Aristotle. Then in 1646 the brilliant Leibnitz arose with his transforming discovery that the world is a universe made from one plan and of one material. It sometimes requires an effort, in one of the present age, to have the idea that there was once a time when this was a discovery come over him in all of its freshness. The notion that the ideas of inter-relation, of the harmony of law, of mutual dependence, of correspondence, were not always assumed as the starting point of thought, seems strange indeed. Nevertheless, in the middle of the seventeenth century they were the crowning discovery of a philosophy all aglow and almost intoxicated with the splendor of its far-reaching generalization. Thought at last, then, had made its circuit. Beginning with undifferentiated sameness it had passed through a period of differentiation in which the stress was very great, to a unity which was organized, to an identity which unified the one and the many.

Leibnitz's great conception of a universal inter-relation did not, however, at once take possession of the world of thought. Isolation was still dominant in the church, state and school, although Fichte then wrote:

"The triunal One
Lives in my life and seeth in my sight,
God only is—and God is naught but life!
And yet Thou knowest and I know with Thee.
If such a thing as knowing can be
Must it not be a knowing of God's life?"

The spirit of unity inspired only the vanguard. Herbart, under its spell, wrought at Jena and Froebel at Blankenburg. In the general life and thought of the people it gained some credit and lodgement, but its reception was not cordial. Columbus-like, it wandered from court to court. At last, Columbus-like, it sought the New World. In an essay—"The Renewal of Life"—written in 1836, Froebel prophesied that the true field for the free play of this principle of unity was the new republic of free thought. To a large extent this prophecy has been realized. With allegiance strong to the principle of isolation, when correlation presented itself we "first endured, then pitied, then embraced." And at last it claims its own to the degree that it dominates the work of this Association.

Correlation in its entire scope includes:

1. In the most comprehensive sense the relation of the individual to the rest of the universe. The universe falls naturally into two divisions; on the one hand is the individual to be educated; on the other his educator—the environment, the rest of the universe.

2. The individual himself is, however, an organized set of activities. He includes the activity of the nervous organism; of thinking, feeling and willing. The primal correlation to be grasped is that of these activities.

3. The universe which faces the individual to be educated consists of the worlds of nature and art and of the institutions. The correlation of these three worlds furnishes an additional theme for investigation.

4. The first of these worlds has been organized by man in what are known as the branches of study. Man himself lives, moves and has his being in the institutions of his own creating. These have their correlation.

5. Not only have these branches of study a relation to man's institutions, they stand in certain relations to one another. Each has also relations within itself.

6. In order to bear a relation to other institutions each one of the

institutions must have relations within itself. Thus within that institution known as the school, among others, are found:

- a. The correlation of University and High School.
- b. The correlation of the Primary School and the Kindergarten.
- c. The correlation of the county and township institutes to the other phases of school work.

It may, therefore, be seen that if nature does not abhor a vacuum, the universe has at least set its seal against isolation, in that the scope of correlation includes all within the world of art; all within every art; all within the realms of nature; all within every realm; all of the institutions of man; all within every institution; all of the activities of the individual; and finally, the relation of the individual to each and all of these.

Passing the others in this inviting field of inquiry, it falls to my lot to consider the correlation of man's institutions.

I will begin by touching upon the relation of the individual to these products of his creation. The first, and probably the greatest insight as to the correlation of the institutions of society, is that which reveals the essential *dualism* in the individual, viewing him as a being to be educated. In my early reading of Genesis, I regarded with wonder the familiarity of the relations seeming to exist between Adam and God on the one hand, and Adam and Satan on the other. In the cool of the day they heard the voice of the Lord God as he walked and talked in the garden. Satan came and went at his pleasure and conversed with them and they with him. The same thing surprised me in Job when there I read: "Again there was a day when the sons of God came to present themselves before the Lord and Satan came also among them to present himself before the Lord." Goethe notices this same familiar companionship of God and the Devil, in his Prologue in Heaven. There he causes Mephistopheles to thus address the God of the universe:

"Since thou, O Lord, approach'st us once more,
And how it fares with us, to ask art fain,
Since thou hast kindly welcomed me of yore,
Thou see'st me also now among thy train."

At last I thought I caught sight of the solution in this: These are but *objective manifestations of the two subjective elements* constituting the human soul. They are symbolic utterances of the truth that *man is a dual being*; at the same instant finite and infinite; possessing the potentialities of unison with the god-like and with the infernal. This was echoed again in Cain and Abel; in the conflict of Achilles and Agamemnon. In the story of Romulus and Remus it is repeated. Plato revealed it when in his image of a man he set the multitudinous, polycephalous beast over against the little image of the rational element. The literature of the world has made it a perennial theme. The self-inspection of every individual also reveals it to him. Robert Louis Stevenson, in his weird story of Dr. Jekyll and Mr. Hyde, has set forth this dual nature in a unique way. Finding the fact as a subjective, as a spiritual truth, he again and again separated, by his magical potion, the two elements and made the evil alone objective in the form of Mr. Hyde. Lowell has beautifully exhibited these two contending elements of spirit in his vision of Sir Launfal. The one element is the limited, the capricious, the defective, the ignorant individual. It represents his individualism. The other element is his rational, his permanent, his universal nature. This represents his personality; his true individuality. This capricious, limited element of spirit, Lowell reveals in Sir Launfal on the morning that he first goes forth to seek the Holy Grail:

"As Sir Launfal made morn through the darksome gate,
He was 'ware of a leper crouched by the same,

Who begged with his hand and moaned as he sate;
 And a loathing over Sir Launfal came;
 The sunshine went out of his soul with a thrill,
 The flesh 'neath his armor 'gan shrank and crawl,
 And midway its leap his heart stood still
 Like a frozen waterfall;
 For this man, so foul and bent of stature,
 Rasped harshly against his dainty nature,
 And seemed the one blot on the summer morn—
 So he tossed him a piece of gold in scorn."

Here individualism is predominant. While traces of the divine element are manifest the element of evil rules. He is more nearly allied to Cain than Abel; to Mr. Hyde than to Dr. Jekyll. Pride the primal and root sin, possesses him, notwithstanding the brightness and beauty of his youthful figure and outer trappings.

Long years after Sir Launfal returned to his earldom a bent old man. Again he beheld the self-same leper. Some magic potion had, during these years, exiled from his soul the baleful Mr. Hyde. He has passed from *individualism* to *individuality*. Isolation is no longer his principle. He has at last discovered his correlation to mankind from the leper to the Son of Righteousness. One can but note how his address to the leper reveals the reigning presence of the universal, permanent, rational element:

"I behold in thee
 An image of Him who died on the tree;
 Thou also hast had thy crown of thorns,—
 Thou also hast had the world's buffets and scorns,—
 And to thy life were not denied
 The wounds in the hands and feet and side:
 Mild Mary's Son, acknowledge me;
 Behold, through him, I give to Thee!"

The unsaved man, then, is a dual being. His real contradicts his ideal.

What is the relation of this dual being to human society—to any one of its included institutions, as the state? Does a given institution mirror both elements? When Dr. Jekyll by his miraculous potion has changed himself into Mr. Hyde, can Mr. Hyde, turning upon any one of the institutions, find himself therein reflected? Could Sir Launfal as he tossed, in scorn, his coin to the leper, discover himself in church or state? In Book II, of the Republic, Socrates in speaking to Adeimantus, said: "A state arises, as I conceive, out of the *needs* of mankind. No one is self-sufficing. Each one has many wants. Can any other origin of the state be imagined?" In Book VIII, in his argument with Glaucon, the subjoined occurs:

Socrates.—"Do you know that governments vary as the characters of men vary—and that there must be as many of the one as there are of the other? Or perhaps you suppose that states are made of 'oak and rock,' and not out of the human natures which are in them, and which turn the scale and draw other things after them?"

Glaucon.—"Nay, the states are as the men are, they do but grow out of human characters."

Socrates.—"Then if the constitutions of states are five, the dispositions of individual minds will also be five?"

This second quotation hints that the state reveals whatever there is in a man's character—both the good and the evil, the rational and the capricious. This could refer to such institutions only as fail to reveal the true ideal. The first quotation which bases the institutions on the *need* of mankind, portrays the true position. Institutions, then, being founded in their very truth and essence on the *needs* of mankind—on

mankind's ignorance, perverted feeling and irrational choice, cannot express these conditions of man. They reveal the opposite—the ideal of the individual; his essential, his permanent, his universal self. The individual manifesting individualism is *the small self*. When he looks full into the face of the institutions he gazes upon his *colossal self*; upon himself as infinite. Herein is revealed the correlation of the institutions.

Correlation must exhibit *unity in diversity*.

1. The primal element in the correlation of the institutions is their common material. Each has as its material *the contradiction* in the individual—the contradiction between his infinite element and his infinite nature.

2. The second manifestation of their correlation is their common problem. Each institution sets up as an end the removal of this contradiction; the production of harmony between the real of the individual and his ideal.

3. Their correlation is made evident in a third unity—each institution is *an organized set of activities* (organized by the ideal of the individual) stimulating the individual to produce harmony in himself by the double process of *renouncing* and *creating*. He renounces, undoes, surrenders his limit, and creates in himself the higher activity over against it. The process that each institution stimulates, therefore, is one of *self-development* involving as complementary principles, grace and justice.* *Grace*, in that the individual sacrifices his present self for another; that is, for his higher self. *Justice*, in that he gives to each self that which is due; he returns to it its own. The lower element is negative. He renders to it its own—negation. The higher element is positive. He renders to it its own—production. The institutions are correlated then, in that each embodies as its *law* the ideal of the individual: as its *sovereignty*, the rule of this ideal over each activity occurring within it; as its *duty*, acts in harmony with the common purpose—the removal of the contradiction between the individual's real and ideal.

This correlation of the institutions is found no less in the expression of their differences. They are one and all instruments of grace and justice, revealing and enforcing ideal standards, and thereby enabling the individual to measure his own defect and inspiring him to overcome it.

1. The family, that primal institution, is a fountain of grace and justice revealing and enforcing the ideal of a self receiving reflected good through the good of others bound to him through both a natural and a spiritual tie; exhibiting his defect in the light of his ideal, and inspiring him to overcome it.

2. The world of industry is an instrument of grace and justice revealing and enforcing the ideal of a self rendering a full equivalent for that received, enabling the individual to measure his defect and inspiring him to overcome it.

3. The realm of polite society is an instrument of grace and justice revealing and enforcing the ideal of a person who looks upon and treats each associate as if he were ideal, thereby enabling its member to portray to himself his defect, and inspiring him to rid himself of it.

4. A temple of grace and justice is the state revealing and enforcing the ideal standard of a person free to pursue his chosen vocation and obtain its fruits; enabling the individual to measure his own defect, and inspiring him to overcome it.

5. A cathedral of grace and justice is the church revealing and enforcing the ideal of absolute holiness, mirroring, thereby, man's defect and inspiring him to overcome it.

6. The school itself, the handmaiden of these, is likewise a realm of

*Institutional Ethics, by Marietta Kies. Allyn and Bacon, Boston.

grace and justice, both revealing and enforcing the ideal of the individual redeemed from feeble thought, perverted feeling and irrational will, to that degree which enables him to participate positively in these institutions. This ideal, too, reveals to him his defect and inspires him to overcome it. Revelation and inspiration are, then, the function of the institutional world.

The revelation and process of these different institutions are manifold and yet one. They are made one by *the idea of the individual* which gives *law* to the workings of each institution.

To these institutions each one comes with his limits of ignorance, with his capacity to love the infinite centered upon a finite object, with an ability to will free will, yet choosing bondage. Standing thus as a tiny dwarf before his colossal self in the institutions, he begs as much space as he can step across in three strides. The boon to the true asker cannot be denied. Expanding, under the influence of these ministers of grace and justice, into man's infinite stature, he passes with one stride over the gloom of ignorance; with another, over all love of the ill of the neighbor; with a third, over all the realm of selfish choice. Thus having within him the universe spiritually, he is forever beyond the grasp of the Inferno. For while Lucifer may claim as his own whosoever has within him spiritually, only a part of the universe, that one who, through the grace and justice of the institutions, has transformed into his own spirit the entire universe, is like Dante after facing the gloom of the Inferno and scaling the steep slopes of the Purgatorio—capable of ascending the three grades of insight:

- 1.—God and the Devil in each individual.
- 2.—The divine element only, of each individual in each institution.
- 3.—The individual made infinite through participation in the institutions.

Then like Dante such an one has become—

“Regenerate,
E'en as new plants with foliage new,
Pure and made apt for mounting to the stars.”

A song “Lift Up Thine Eyes,” by Misses Lillian Adams, Helen Loeper and Laura Hanna, came next on the program, after which President Sandison announced the following committees:

On Resolutions; W. A. Hester, Evansville; Sanford Bell, Aurora; W. C. Belman, Hammond; Quitman Jackson, Greenfield; R. A. Ogg, Greencastle.

On Reading Circle: J. N. Study, Richmond; Chas. Meek, Terre Haute; Superintendent E. L. Hendricks, Johnson Co.; J. A. Greenstreet, New Castle; J. F. Scull, Rochester.

On Railroads, for N. E. A.: W. A. Bell, Indianapolis; C. F. Patterson, Edinburg; D. M. Geeting, Indianapolis; to which was afterward added D. K. Goss, Indianapolis.

After adjournment of the evening session, the committee on nominations was selected in the usual manner, resulting thus:

First district, Mrs. Hornbrooke, Evansville; second, A. E. Humke; third, J. P. Funk; fourth, E. A. Remy; fifth, Michael Seiler; sixth, W. R. Houghton; seventh, E. B. Bryan; eighth, W. R. Snyder; ninth, J. W. Lydy; tenth, R. K. Bedgood; eleventh, A. H. Douglas; twelfth, G. M. Naber; thirteenth, J. H. Bair.

FRIDAY MORNING, DEC. 27.—The devotional exercises of this session were conducted by Rev. D. J. Ellison, pastor First Baptist Church.

Music followed, after which Professor John A. Bergström, assistant professor of Pedagogy, Indiana University, read a paper on "The Correlation of Activities," which will appear in full in a subsequent issue of THE JOURNAL.

Mr. J. N. Study, of Richmond, chairman of the legislative committee, presented a report, the synopsis of which follows.

REPORT OF LEGISLATIVE COMMITTEE.

The following measures were agreed upon by the joint committee as being in a line of needed educational legislation.

First. The direct university tax, by which the state institutions of higher learning might be put upon a better financial basis. A bill was framed and presented to the legislature making a fairly liberal tax levy for these institutions. This met the usual prunings and suffered at the hands of necessary compromises until it provided for a tax levy of one-sixth of a mill on every dollar of taxable in the state, proceeds of such levy to be distributed as follows: To the Indiana University, one fifteenth of a mill; to the State Normal School and Purdue University one twentieth of a mill each. It is expected that this tax will produce an annual revenue of about \$200,000 of which under the provisions of the act, Indiana University will get \$80,000 and Purdue and the Normal School each \$60,000. The passage of this bill was obtained through the heroic and persistent efforts of the friends of the respective institutions.

The *second* measure agreed upon was the measure extending the term of office of County Superintendent to four years and postponing the election until June 1896, thus giving to the newly elected township trustees the opportunity to serve one year in office before being called upon to elect a County Superintendent. A bill was prepared providing for these two things, and was introduced into the legislature, but failed to pass.

The law which has since been declared unconstitutional, was passed instead. The passage of the bill was an educational mistake, and it has turned out also a political mistake.

The *third* measure presented by the committee was the examination and licensing of county superintendents, city superintendents and professors in the state institutions of higher education. A bill was framed and introduced, but failed to pass.

The *fourth* measure was a stringent enumeration law. The necessity of some change in this respect had been long felt. It is unnecessary here and now to recapitulate the details of the contest. At last the representatives of the various interests agreed upon the following as a settlement of the question: (a.) That the whole population between six and twenty-one years of age should be taken as the proper basis of distribution of school funds. (b.) That the passage of an act should be secured making impossible, fraud in the taking of the enumeration. A bill had been framed and introduced into the legislature of 1893 to carry out this agreement. This bill had failed to pass both houses in 1893. It was re-introduced in 1895 and became a law. This law, it is hoped, will give us a full and fair school census.

The *fifth* measure was the putting of the state library under the management of the State Board of Education, thus doing away with the unseemly scramble for the office of Librarian at each successive legislature; as also providing for the better management of the library itself. A bill was prepared, introduced and passed, making the proposed reforms, law.

The *sixth* measure agreed upon was the township library law. A bill for the purpose of establishing township libraries and providing

for their maintenance was drafted and presented to the legislature but it failed to pass.

Seventh. At the request of the committees upon education of the two houses, a free text book bill was prepared and introduced into the House. It failed of passage in the rush of business incident to the last days of the session.

Eighth. Owing to the lowering of the state tuition tax levy from 16c. to 13½c. on each \$100 in 1893, and the certain prospect that the legislature of 1895 would still further lower the state levy—the levy is now 11c. on \$100—it was advisable in the eyes of the committee to advocate the raising of the limit of local taxation from 25c. to 35c. As a bill already prepared to repeal the celebrated Grab Act of 1893 contained a provision to this effect, no bill was presented by your committee as a committee. The repeal of the aforesaid Grab Act, while not a matter of committee work proper, was accomplished by the efforts of members of the committee, acting as individuals. The act of 1893, intended as it was to provide for the return to the treasury of unexpended balances of state school funds, had by an ingenious construction of the law been turned into an instrument of oppression and of downright robbery. Funds raised purely by local taxation were taken from many corporations and re-distributed. The monstrous doctrine was set up that if a school corporation should be content with whatever amount of school money distributed to it by the state would provide, it might use every dollar so distributed, but if, in the laudable desire to extend its school term, it should levy a local tuition tax and by any inadvertence raise more money than might be expended, it should be deprived of the right to use *all* that might have been originally distributed to it by the state, and allowed to use only a proportional part thereof, thus, in reality punishing it for its ambition for better things educationally. The law of '95 reaches the desired end, viz.; the return of unexpended balances of state funds to the state for re-distribution by a simple piece of book-keeping in the county auditor's office, dispensing with all legal proceedings.

Mr. B. F. Moore, Superintendent of Frankfort schools, read a most interesting paper entitled "Correlation as Inter-relation of Subjects," of which the following is an abstract:

"It is doubtful if any question connected with education has ever, in the same length of time, been accorded the consideration that has for the past ten months been given to the question of correlation. To its solution is being given the highest and best thought of the educational leaders of the time. Its discussion has called forth, naturally, conflicting views as to its comprehension and the methods for its realization.

"Some phases of the subject seem to be practically agreed upon, and only await the results of experimental test in the school room. The philosophers are working out these questions, and the teacher has his part in them. It is for him to search out some common ground that must be and will be the integral process of any system of unification of school curriculum, and to inquire how these may be carried out in the every-day work of the school. The ultimate end of correlation is to make the various subjects mutually assist and reinforce each other. Whatever the number of subjects, whatever differences may exist as to their basis or method of procedure, all work of the school should be yoked together—interrelated.

"To avoid confusion of terms correlation is the generic, including all that is commonly understood in the terms co-ordination, concentration, and interrelation. Though this assumption may not be warranted by the dictionary, it seems to be fully borne out by recent discussion. Interrelation, co-ordination and concentration are not used as wholly synonymous. Concentration includes the subordination of secondary

to primary studies, as its central idea; co-ordination deals with the association of subjects or groups of subjects of equal rank each retaining its own distinctive features and its own principle of sequence of parts. Inter-relation applies to all processes of establishing relations in the work of the school so that each subject may assist and reinforce the other.

'It may be assumed of correlation, *first*, that there is a well-defined aim of education clearly before the mind of any one who attempts an interrelation of school work. *Second*, that the subjects of study and their educational values or their relative values in promoting the realization of this aim have been determined. *Third*, a knowledge of the mind of the child, the processes of activity, the laws of its growth and the stages in its development. These are fundamental to any rational adjustment of school work.

'The question of interrelation of subjects presents itself in three phases. The interrelation of subjects within the departments of learning; the interrelation of departments of learning; the interrelation of subjects of study with the world in which the child lives. The first is illustrated in the department of mathematics by the interrelation of arithmetic, algebra, geometry, etc. It is in this first phase, perhaps, that judicious interrelation is producing the most radical changes. Science subjects, until recently thought to belong to the high school and college, have been brought within the comprehension of children in the primary grades. Instead of being taught as formerly in an established logical sequence, they are harmoniously blended throughout the elementary school.

'Under the second phase, we assume that in any well-ordered curriculum of study there should be represented what Dr. Harris chooses to call 'the great divisions of human learning,' properly adjusted, of course, to the stage of development at which the child has arrived, together with such other departments as are necessary to a realization of the true functions of the school. Any rational interrelation of the departments of study involves the recognition of two great classes of studies—content studies, or 'those upon which it is fitting that the mind should dwell,' and form studies, or 'those that comprise the means or modes of expression by which thoughts are communicated.' These may be regarded as co-ordinate or complementary classes, the one being as necessary as the other in the proper development of a child. The one deals with the material upon which it is fitting that the mind of the child should dwell, while the other constitutes the means or arts of expression. The principles of correlation require that these arts shall be taught by constant reference to a noble and useful content. When a child reads or writes he shall have something worth reading or writing.

'The third phase—the interrelation of the subjects of study with the world in which the child lives—is the culminating phase. It is here that we approach nearest the true end or aim of education, the preparation of the individual for complete living. Miss Arnold has very aptly put it in these words; 'The child comes to school, not to collect facts of knowledge simply, but to receive such training as shall enable him to interpret life truly and to live a life worth living, in accord with the highest ideals. The office of the school is to open up avenues wherein he may find enjoyment, knowledge, power, which he may share with his fellows.'

'The demands of the civilization in which the child lives will determine mainly both the branches to be studied and the extent to which they are to be studied. 'These will determine what is most useful to make the individual acquainted with physical nature and with human nature so as to fit him as an individual to perform the duties in the several institutions, family, civil, social, state and church.' It would certainly

be a very narrow construction to put upon recent discussions of this subject to assume that preparation of the child for life means only a preparation for the actual; for assuming his duties in and carrying out the details of the established social order. Such a course would make progress impossible. The child is not to be educated as a means of perpetuating the social disorders and imperfections of any period of civilization, but rather as a means of removing them.

"It is not in the child's actual environment alone but with the spirit of the age; with what is ideally involved in our civilization; with the higher principles which it is struggling to realize, that the child must be correlated. True, we must interrelate the work of the school with the actual. Immediate utility demands this. Progress, however, demands that the present established order be raised to higher planes, and as a means to this that the child be taught what is ideally involved in the civilization in which he lives. He must be elevated above the pressure of immediate material interests, to something higher, better, nobler."

W. A. Millis, superintendent of the Attica schools, opened the discussion of Mr. Moore's paper. He emphasized the relation between the thought studies and the expression studies. The fact that thought necessarily precedes its expression does not require that it occur prior to or independent of it, and is no argument that the content studies precede the formal studies in importance or logical connection. Content does not exist except as defined and encased in form; and form is possible only as the limitation and encasing of content. All school studies include both, and any attempt to treat them as distinct classes will result in indefiniteness or superficiality. Some studies afford better means for mastering content, others for the mastery of form; but the complementary element cannot be sacrificed without losing the chief value of the other elements. The ratio of value between these elements is practically constant throughout the course of study. Theoretically, thought precedes expression. But practically thinking, must remain in an exceedingly inchoate and rudimentary stage until the mind secures some symbolism in which to organize its content. The word necessary to the organization of the idea is not so much the spoken or written symbol as its inner mental correspondence. By furnishing the mind a symbolism constituting a form of thought, language becomes indispensable to true thinking.

J. H. Tomlin, superintendent Shelbyville schools, continuing the discussion, said, among other things, "Correlation correctly considered and applied increases the value four-fold. It is both a test of knowledge and an instrument in its acquisition. To separate essentials from non-essentials, to see the true scope and bearing of a subject, to organize it into living knowledge, to be able to judge between great principles, and ordinary ones, to estimate the new at its real worth, to combine the new and the old and to use them judiciously must always exercise the best powers of the teacher."

After a short recess twenty-one pupils from the Richmond high school, under the leadership of W. J. Stabler, supervisor of music in Richmond, sang "The Peasant Wedding," by Koschat. Its rendition

was beautiful and formed one of the most enjoyable features of the convention.

The Report of Indiana Reading Circles, presented by Mr. Glasscock, was received with marked attention and interest. Mr. Glasscock referred briefly to the advantage to the teacher of the culture and refinement obtained through literature. He spoke of the high purpose of the Teachers' Reading Circle, that of bringing culture and professional knowledge systematically within reach of even the most isolated, and affording opportunity to obtain a certain degree of training with but little outlay of time and means. While it does not accomplish this completely, it does its part, and the earnest, thoughtful teacher finds much to help him not only in the books prescribed, but also in the mutual assistance their common study and discussion at institutes afford, thus rendering possible harmony of thought, connected effort and union of sympathy.

What the culture side is to the teachers, the Young People's Circle is in a larger measure to the children of the state. The very organization of our government calls for intelligent citizenship, recognized by the state and nation in their provisions for public education. Any movement that supplements and strengthens these provisions is adding to the worth of our citizenship. The Y. P. R. C. is a strong factor in this development. It has made it possible, so far, for more than two hundred thousand children of Indiana to read the newest and best child literature. This does not represent the full strength of the Circle, whose largest influence and best work will be manifested in the homes and lives of more than can be shown by figures. The books purchased from year to year are placed in the school rooms and form the nucleus for district libraries, the success of which depends upon the number of books read as well as upon the character and number purchased.

The Teachers' R. C. has been in operation eleven years, with an annual membership of from ten to eleven thousand. The Y. P. R. C. was organized three years later and its growth has been no less constant. There are two primary reasons for the success of the reading circle movement in our state—our admirable school system, and the business methods of the organization.

The expenses of the Circle for the past year have been unusually large as much of the business of two years' work has been transacted within the past year. The following is a general statement of moneys received and expended:

Amount received	\$2234 68
Amount expended.....	2184 69
Balance.....	\$ 49 99

An itemized account of receipts and expenditures may be found on the books of the treasurer, and with him are also the receipts, bills and vouchers for all expenditures.

"The Need and the Way of Reform Legislation for Indiana Schools," by David K. Goss, superintendent Indianapolis schools, was the last exercise of this session. Mr. Goss spoke of existing evils in the school

system throughout the state in a fearless manner, the truth of which carried its own conviction. He advocated a high standard of qualification for township trustees, county superintendents, and all other school officers, with longer terms of office and greater freedom and independence from political restraint. He thought the appointing of teachers should be in the hands of city or county superintendents, provided they meet the suggested scholastic and professional requirements. And he would make the offices responsible to the state superintendent and State Board, placing power of removal for cause in the hands of these latter.

The annual address was delivered Friday evening, December 27, by Dr. Nicholas Murray Butler, of Columbia College, New York. The speaker was introduced by Supt. J. A. Carnagey, of Columbus. In his "Ideals of Education," Dr. Butler gave the Association a noble theme beautifully developed. After eulogizing the nineteenth century, its men, and its progress in all lines, its constant and continual extension of privileges and improvement of ideas, the speaker passed to lands and times to which the beginnings of things pertaining to learning and literature belong. He showed that all educational growth, of whatever race or nation, has had its origin in the discovery of a definite purpose to be evolved through and by means of education and educators. The earliest teaching was based upon the natural wonder and curiosity of mankind. In those times thought and instruction were devoted to discovering the origin of things. At first the parent was the sole teacher; but after the priestly class became differentiated, which it did among the early Aryans, the Greeks especially, who peopled each place with its deity, the priests became the special agents of instruction. Long after this the little schoolmaster differentiated himself; and it was when the training of the young passed into special hands that men began to inquire into it—to ask "Why?" and "Toward what?" Earliest man made no attempt to develop the individual—hence we find a lack of inventiveness and of progress. Dr. Butler forcibly illustrated this in the history of China and other static nations in which the school revolved for ages in the same track. He showed that wherever the people have been kept down by caste or custom, there learning has languished. He epitomized the Greeks as being the most reflective of peoples—they *saw*. Their accomplishments in the fifth century B. C. make that period almost a microcosm of our own civilization.

The dominant idea in the Greek mind, said the speaker, was proportion and harmony between man's mental and moral nature. The "sound mind in a sound body," though said by Juvenal, expressed the Greek idea; and with this as the underlying principle they educated the young in the light of their surroundings and their religion. As a consequence, the Greek civilization is immortal, and has become a part of our own. The Greek idea of the state was, that the mass is equivalent to the sum of its part. They regarded the state as the ideal citizen, and in their efforts to reach their ideal were the first to set the individual free. Education with the Greeks meant work. Although the

Greek nation can never be considered a nation in the complete sense of the word, yet Greek civilization must always remain a type of lofty ideals. The Romans added ideas of practical usefulness to the culture of the Greeks and their desire to develop naturally man's powers and ambitions; and it is safe to say that all modern religions, all social, political and geographical institutions, represent the same principle as that which dominated the Greeks in the fifth century B. C.—that of individuality.

Dr. Butler clearly pointed out the dangers resulting from too great an individualism. He said that every civilization that has exalted and deified the individual has ended in revolution; while those which have attempted to reduce the individual to the mass have fallen. The civilization of the nineteenth century, profiting by the successes and failures of others, attempts to reduce the individual to the institutions, believing that he is the most highly trained individual whose training fits him to live with other individuals. He defined liberty as freedom to develop in one's own way. The office of the school is to inspire in each one to be educated a desire to make his own way the best way, so that through the individual, and with our rich inheritance in the influence of all nations and peoples from the dawn of history, we may reach the same heights as have been attained by others. "If we take into the school the proper idea—'Liberty under Law'—ancient achievement will find its parallel in modern opportunity."

At the close of the address, on motion of Mr. W. A. Bell, a hearty vote of thanks was tendered Dr. Butler. A committee to confer with the college section on the question of including the latter in the Association was appointed by President Sandison. This committee, consisting of Hamlet Allen, of Washington; J. Z. A. McCaughan, of Kokomo, and R. A. Ogg, of Greencastle, reported favorably at the next session. A reception at the Grand Hotel closed the day.

The Saturday morning session was opened with prayer by Rev. J. A. Rondthaler, of the Tabernacle Church, Indianapolis.

W. A. Bell, chairman of the railroad committee, explained why Buffalo will probably be chosen as the next meeting place for the N. E. A. He said it is chiefly due to the fact that the usual railroad terms can be obtained there, while none at all can be secured for Boston, which latter place was the first choice of the N. E. A. Mr. Bell also suggested that D. K. Goss be added to the railroad committee, which was promptly done.

In view of the fact that the executive committee of this association is always composed of new members, W. S. Almond, of Delphi, moved that it be the custom for the chairman of that committee for one year to be an advisory member for the following year. The motion was carried and went into force at once.

Cordial responses were made by the President, for the Association, to the following telegrams:

LANSING, MICH., Dec. 27, 1895.

State Teachers' Association, Indianapolis:

Michigan teachers in convention at Lansing send greeting.

CHAS. MCKENNY, Pres.

ANACONDA, MONT., Dec. 27, 1895.

President Indiana State Teachers' Association:

Montana State Teachers' Association, three hundred strong, send cordial greetings. W. E. HARMON, Pres.

"The Relation of the Kindergarten to the Primary School," was ably portrayed by Miss Schaeffer, of La Porte. The paper will appear later in the JOURNAL.

Miss Viola Ewers, of Richmond, in her discussion of the same subject, read a portion from a non-professional description of a kindergarten in San Francisco, which showed that the pupils, young and small though they were, were quick enough to invent, to contrive, to imitate and to construct; that they were gentle and thoughtful in manner, quiet in action, and keen in the enjoyment of their play-work. Miss Ewers stated that the picture was not in the least overdrawn, and that the same things would be evident in any well-regulated kindergarten, so that the question resolved itself into one of means of attainment. The true kindergarten teacher understands that play is only another name for self-activity. There should be the same activity, freedom, and joy in the work of the primary school. The perfectness of the relation depends upon the clear understanding on the part of the primary teacher not only of her own work but also of the philosophy and ideals of the kindergarten. Thought-work and heart-work must animate the primary teacher.

Mr. D. C. Arthur, principal of the Logansport high school, read an excellent paper on "The Relation of the University and the High School," of which the following is a synopsis:

"The high school is the child of the university. It grew out of the old academy, which was the child of the college. The college and university shape the character of the high school through the course of study and the high school teacher. When the high school diplomas was made the certificate of admission to the university, the power of determining the high school course was lodged in that institution. This is not an occasion for alarm, but one for congratulation. The university is meeting the responsibility of working out a course of study. In doing this the departments often make claims which are unreasonable and which cannot be met. The university as a whole cannot be held responsible in all cases for what the head of a department may do or say on this matter. It is also the right, and duty of the university to prepare the high school teacher. In this lies an evident weakness. Men and women are sent out to teach with no equipment but their learning.

"The university should provide special training for all who want it, and make this training the basis of its recommendation for positions. No one should be sent out to teach unless he has previously been a teacher, or has had some special information upon teaching, or, at least, shows some special aptitude for teaching. The university owes it to the high school not to recommend, indiscriminately, its graduates for high school teachers."

"The Problem of the Institute" was presented by four writers, the consensus of whose opinion indicated clearly that the institute is not accomplishing the best or the most in its scope. Its possibilities are

many and great; its results, too often, are meager. Excellent suggestions were made in these discussions.

The opening paper, by Supt. F. D. Churchill, will appear in full. State Superintendent D. M. Geeting said that many teachers who attend the institutes are inexperienced, with little beyond the initiative power developed. Such teachers would be greatly helped by "Round Table" talks, where the weak would catch inspiration from the strong, and through them realize that teaching should have a distinct end in view, and to watch for and study that end. He favored the sectional division suggested by Mr. Churchill. Although not academic, it would be professional, and would enable teachers to become better acquainted thus removing restraint. He thinks that each teacher owes his strength, co-operation and helpfulness to others, and each should be prepared to give these at the institute.

Mrs. Virginia G. Cory, of Dunreith, gave a view of the township institute from the teacher's standpoint. She said that new teachers are often shorn of half their interest by the autocratic manner of the older members. How to silence the autocrat and secure a freedom of expression which will beget enough inspiration to help tide over the discouraging days of school life is the question. Do we not lack professional candor? Although the children may listen attentively to the wise precepts we give them, it is this lesson of our doing, our attitude toward the school work in general, which they will assimilate. The exact line of institute work we shall follow is unimportant compared with the preparation we make and the spirit in which we enter into the discussions. When we amalgamate the enthusiasm of some of the country districts with the learning of some of the more cultured ones, we shall have meetings which all will be eager to attend.

Quitman Jackson, superintendent of Hancock county, presented a strong argument in favor of the preliminary institute, where questions of organization, school management and all matters necessary to put into effect the unity of action so essential to the best interests of the schools, should be discussed. Here the inexperienced teacher should find his greatest help, asking questions and receiving assistance, such as will enable him to take up his work intelligently. The county superintendent should be the leading spirit here, and should set forth clearly his plans for the coming year relative to the course of study, examinations and other matters under his direct control. Mr. Jackson reiterated much that was advocated by the others, particularly favoring fewer subjects, less work in given subjects, clearer outlines, giving room for greater individuality, definite suggestions for reference material, and more strongly developed social phase. He thought that whoever is best able to do so should act as leader, without regard to any rotation for the sake of bringing each one on duty at regular intervals. He advocated holding all institutes at some time during the school term, rather than in the summer vacation. He would have institute instructors thoroughly imbued with the aim of their work which they should be allowed to present in their own way, the great object being

to inspire teachers and lift them to higher ideals. He spoke encouragingly of the character of institute work, which he thought is generally good; while the others felt that it has fallen short of its aim and possibilities.

The interest and pleasure of this last session were greatly enhanced by the paper of Prof. A. J. Gantvoort, of the Cincinnati College of Music, on "The Disciplinary Value of Music in Education." Prof. Gantvoort defined education as that process of training by which human beings are raised from an original nature to an ideal nature, and said that whatever helps to produce this change must be elevating. True education involves the training of body, intellect and emotions, and each branch of study should have an influence over one or more of these powers. Whatever value music may thus have is its disciplinary value. He then showed that music affects physical nature by affecting the motion of the blood, increasing the capacity of the lungs, correcting and educating ability to discriminate sound, thus training the hearing, and in many other ways rendering the singer stronger and better physically. It affects the intellect by training the memory. As a mental stimulant, sight singing has greater value than mathematics or logic. The Greeks recognized this by placing it in the "Quadrivium." Time, pitch, length and power of notes require accurate, rapid, united action of mental activities. One line of music involves the absolute absorption of the faculties of the mind in the quick perception, correct judgment, memory, etc., called forth. The greater value of music is its influence over the emotions. The one thing more important than knowing one's self is ability to govern one's self. Music gives a moral balance, by furnishing an outlet to the emotions. No one can sing or hear music and cherish anger or hatred. Baser feelings give way when we sing. Hope, courage, affection, charity, sympathy, devotion—all that is best and purest can be called into being by the sweet spirit of song, which expresses feelings that words alone can never tell.

J. R. Hart, permanent secretary of the Association, read his report for the last two years, which was accepted and placed on file.

The committee on nominations presented the following names for the ensuing year, which were voted on by the Association. For president, Supt. J. F. Scull, Rochester. Vice-presidents: Rob't. Spear, Evansville; P. P. Stultz, Jeffersonville; Obed Lawrence, Terre Haute; G. W. Hufford, Indianapolis; W. S. Almond, Delphi; L. E. McCord, Peru; W. B. Sinclair, Knox; recording secretary, Miss Helen Sanxay, Madison; permanent secretary and treasurer, J. R. Hart, Lebanon. Executive committee: Chairman, W. A. Hester, Evansville; C. F. Mackintosh, G. L. Roberts, A. W. Forsythe, Louis Eichorn, Mrs. Emma M. McRae, L. M. Sniff.

The committee on Reading Circle Board recommended the re-appointment of J. A. Woodburn and D. K. Goss. Carried. This committee also presented the following resolutions:

WHEREAS, it has become customary for this Association to express publicly its views on leading issues and matters pertaining to its functions, be it therefore:

Resolved, That this Association respectfully petition the next legislature to appoint a competent committee and authorize the same to codify the present State School Law of Indiana, and re-enact the codification as a whole; and further that the said committee be composed, in part, of men directly engaged in school work.

Resolved, That the President of the Association shall appoint, each year, a committee of three, whose duty shall be to audit all the accounts under the control of this Association.

Resolved, That this Association strongly disapproves the unseemly methods sometimes resorted to by the agents of school book companies and supply houses in bringing pressure to bear upon the members of school boards to purchase the products of the houses which they represent.

Resolved, That we express our disapproval of anonymous attacks upon officials representing this Association.

WHEREAS it is the chief function of this Association to spread, intensify and elevate the professional spirit of the educators in the state, be it

Resolved, That we, as a body, heartily endorse the work done during the past year by the Indiana Reading Circle, and encourage it in its efforts to universalize education.

Resolved, That the classical section, recently organized, be recognized as a component part of the State Teachers' Association.

Resolved, That the thanks of the Association be tendered to Tim Griffin, custodian of the State House for services rendered, and to D. H. Baldwin for the use of piano.

On motion of Mr. Goss the first of these was amended, placing the appointing power in the hands of the president of the Association.

Upon investigation it had been found that the law relating to objectionable literature included only that of an obscene nature. Thinking it ought to be made more comprehensive, the committee added the following resolution to the above, which was adopted with the rest:

"That this Association instruct its legislative committee to prepare a bill prohibiting the sale or display of vicious literature, posters, etc., in the state and to urge its passage by the next General Assembly."

On motion it was agreed to appoint an auditing committee of three each year. The president appointed Chas. Cunningham, of Bedford; T. F. Fitzgibbon, of Elwood; Russell Bedgood, of La Fayette.

No further business being presented the meeting of the S. T. A. for 1895 was adjourned.

HOWARD SANDISON, President.

HELEN SANXAY, Recording Secretary.

THE HIGH SCHOOL SECTION.

Its annual session was held Dec. 27, 1895, with W. H. Hershman, New Albany, presiding.

The first paper on the program was given by Wm. H. Bass of the Industrial Training School, Indianapolis. The theme was, "Manual Training in High Schools." The purpose of manual training is generally misunderstood; some fearing that it will teach trades, others that it will not. Manual training does not teach a trade, yet it deals with some materials used in trades and aims to teach the mind through

the hand. By such training the boy is enabled to become what he chooses and to take care of himself, and no other line of work can take the place of this one in certain methods of training. The memory is strengthened, for the child does not forget the various steps taken in the construction of an article, but is able to recall them all years afterwards, and such memory incites him to greater effort. Every well made exercise is a product of industry and perseverance no matter what the value of the article. In pointing a piece of iron the effort is not physical but mental. The maker must think between blows that follow each other with great rapidity and decide where the next blow must be made in order to be more effective, and such thinking gives self-confidence and power of thought. The imagination is also developed, for the pupil must picture the piece on which he is working before it is finished and, in his fancy, see it in its completed form. Statistics show that pupils who have had such work in manual training are greater successes in both Physical and Chemical Laboratories because of their superior skill in manipulating apparatus and greater ability in comprehending the nature of experiments. In fact this manual training tends to the harmonious development of the entire boy. This paper was discussed by W. A. Bell of Indianapolis, and Prof. Goss of Purdue University.

Two papers were read on "The Cultivation of Oral Expression." The first discussed the subject in connection with the "Teaching of English." and was presented by Mrs Esther K. Gentry, Michigan City. The child enters school a perfectly natural being; it must talk and does talk, both in order and out of order. It believes all things and is in dead earnest. The natural expression extends little farther than the first four years of school life, and, soon after this, expression becomes artificial out of school as well as in school. The boy's physical conditions have become changed. He has grown larger than his clothes, his feet are a known quantity, and although natural on the play grounds he does not know what to do with himself in the school rooms. The young people look upon themselves physically instead of psychically and in the high school, for the first time, begin to realize that people differ mentally as well as physically. That the evils in oral expressions, which come up by the gradual substitution of the artificial for the natural may be remedied, the English work must be made continuous and have a value put upon it, which is as important as that attached to the study of Latin and Science. Pupils must be led to study the highest kinds of thought expressed in literature. As we study characters and institutions in Shakespeare, politics in Burke, so the great field for oral expression is literature. Nature also furnishes a broad field for the work. Rocks may be built into thoughts, and beauty wrought into the imagination. Thus oral expression becomes a growth, the pupil learns to think in a connected manner and expresses himself accordingly. The teacher also is an important factor in this work. He should have an idea of right and wrong, a spiritual

insight, for his example is an important source of information to the child in the use of oral expression.

The second of the papers on the "Cultivation of Oral Expression" was given by H. J. Leggett, La Porte High School, who presented the subject in connection with the "General Work of the School." The reader prefaced his remarks by some comments upon the discussion at the college association, the day before, with regard to the use of English in the high school as exemplified by the students who enter our colleges, and seemed to feel that the criticism of such work was a little severe. The general inability to give proper expression to thought, is as familiar as the story of Jonah and the whale, but does it follow that men have had no education because they cannot adequately express themselves in public assemblies? The names of people who can speak successfully in public are not legion. These faults, in their relation to school work, have come from lack of practice rather than failure to present precept and theory. Much can be done by the teacher himself, who possesses a duty to self, to school, to public, through school, and this duty is the cultivation of proper tones and pleasing expressions. This paper suggested some practical methods for this training in connection with the school work, and such methods as had been put to the test by the speaker in the school room. The pupil's habit of sitting and walking should be corrected, as each position always means better breathing—hence, better tones. Some simple calisthenics will aid much in this respect. The organization of classes into societies, in the conduct of which some parliamentary discussions will arise, has proved very helpful. Some literary exercises may be prepared and handed in for correction, while simple subjects may be discussed without much previous preparation. In the high school such work may be made somewhat more exacting than in grades. Clear thinking is the most important factor in this work, and the ability to do this thinking is developed especially in the study of mathematics and science when the eye is trained to see, the hand to act, and the mind to formulate. With such careful instruction the natural expression must follow the clear thinking.

These papers were discussed by E. A. Remy, Columbus High School, and Miss Charity Dye, Indianapolis High School. The former gave some interesting extemporaneous remarks upon the side of his own experience in such work and the thoughts of some of his high school pupils from whom he had sought information as to what had aided them most in the school work in the cultivation of oral expression. The emphatic point with this speaker was that stimulating the child to think clearly and accurately will be the best method for overcoming defects in expression. Miss Charity Dye had a carefully prepared discussion on this subject and presented some excellent methods for use in the school room. (Miss Dye's discussion will be printed in full in a later issue of the JOURNAL).

S. B. McCracken, Elkhart High School, read a paper on the "Educative Worth of Biology in the High School." In the high school we

have nature studies and formal studies, the one taking care of the matter, the other of the mind. In the biological group of the high school course, the question arises as to how the science teacher shall make such studies of influence in educating boys and girls and as to the motive in such work. Biological work gives much valuable knowledge to the student and quickens activities to be continued in later life. This first hand discovery by the children themselves has an educative value furnished by no other line of high school work. When the student sees such abundant evidence of a plan, in all he studies, must he not become wiser, more human, more conscious of an all ruling Providence? It is not pleasant or profitable to attempt much with the microscope. Beyond a few specimens leave such work, and do not spend all the time in the laboratory; for the pupil must not be kept ignorant of manuals and accumulated scientific knowledge. Vivisection should not be practiced in the high school for the pupils are not mature enough to have such work. Collections should be made for the public schools and not for the individual student. One bird, as the pigeon, may be studied carefully, and then another one, as the owl, studied with a view to contrasting their structure and habits and finding reasons for the same. Good authorities should be consulted in all this study.

Dr. J. T. Scovell, Terre Haute High School, discussed this paper. In discussion of biological truths be careful not to lead the pupil to expect the same degree of exactness that he finds in mathematics. There is something in idea of design that hinders and hampers us. There can be no proper biological work without the microscope, which must be in the hands of the student. Vivisection may also be practiced with good results, and has been of incalculable advantage to man. There is no more torture in this than there is in the conduct of a small boy toward the canine race. Vivisection should be carried out not for amusement but for business.

Dr. Coulter, of Purdue University, was presented and completed the discussion of this question with some excellent remarks. The main thing to be considered in biological study is a purpose, and such definite aim held in mind throughout the entire course is of exceptional value. A power of perception must be trained and this is done best by clear cut, keen observation. If the observation is muddy then the expression is muddy. When pupils reach the high school they are making generalizations and the real purpose of this work is not so much information as inspiration. On the subject of vivisection, Dr. Coulter announced his views as quite pronounced. He does not believe in the practice of vivisection in the high school or university for man should know that life is a sacred thing in both animal and man. Only great leaders can think of making use of vivisection and then in extreme cases. Biological work as a whole strengthens perception and reason and powers of generalizations.

The officers elected for the coming year are: President, Miss Martha Ridpath, Greencastle; Vice-President, B. B. Berry, Fowler; Secretary,

Miss Annette Ferris, Thorntown. Executive Committee: D. R. Ellabarger, Richmond, Chairman; E. B. Bryan, Indianapolis; S. W. Baer, Nappanee; Miss Anna G. Scott, Monticello; Miss Mary B. Cox, Huntington. A committee of three was appointed from the high school section to meet with a committee from the college association to determine requirements for entering college—particularly the requirements in English. This committee consists of Hamlet Allen, Washington; J. Z. A. McCaughan, Kokomo; R. A. Ogg, Greencastle. A motion was also carried that the Executive Committee of the high school section meet with like committee from other sections with a view to unifying the work of the high school as presented at the association, it having been suggested that the high school section was being sectioned to death.

W. H. Hershman, New Albany, Pres.

Adelaide Baylor, Wabash, Sec. pro tem.

ENGLISH SECTION.

The second annual meeting of English Section was held December 27.

Miss Edith Reilly, of the Evansville high school, had been chosen at the last meeting as delegate to the Chicago conference of teachers of English. In reporting to the association the result of the meeting Miss Reilly emphasized three things—

First, the recommendation of Professor Demmon, University of Michigan, that all text-books on formal rhetoric should be done away with. This created great discussion at Chicago.

Second, the scheme presented by Prof. Davidson, formerly of Bloomington, but now of Cleveland, Ohio. This gave a complete and specific course for each month's work. It was received with favor by the majority of the teachers.

Third, the recommendation to school officers that teachers of English be paid for time spent in correcting pupils' manuscripts according to the basis of laboratory work.

The report stated that the schools of Indiana are now united with those of all states, from Maine to the Rocky mountains, in English requirements.

This report was followed by a paper on "The Teaching of English Prose," by Professor Milford, of Wabash College. The speaker said the first thing for a teacher of literature to determine, must be the special educational value of literature. The present interest in the teaching of literature is encouraging to all teachers. During the last decade the trend has been toward science. English has been neglected. Especially is this true of the elementary English studies—reading, grammar, spelling and composition. In the teaching of English prose, Prof. Milford considered—Essay and Criticism, Oratory and Fiction. He outlined a course of study under each of these heads and gave many practical suggestions for presenting the outlines. The speaker would have the teachers emphasize taste in literature rather than philology. This paper called forth much discussion on the books selected by Prof.

Milford in his outline and in his method of presenting fiction to high-school pupils.

Following this was a paper, "English in the Grades," by Miss Fidelia Anderson, of the Indianapolis high school. Her paper was based upon her own knowledge of the subject and it set forth means whereby grammatical correctness can be secured with the least expenditure of force. She spoke often on the "Trinity of English." Daily practice in observation and the proper expression of the thought resulting therefrom; the learning of correct grammatical forms of expression in order that one thought may be clearly and correctly given; and the reading of good literature suited to the child, its discussion in a simple way, and the committing to memory of choice poems. These three parts of the work form a great trinity of English in the grades. If conscientiously carried out, the pupil will leave the ward schools with reasonable power to see, power to think, power to tell, power to enjoy; and his spirit will have been transformed by contact with beauty and truth.

A prolonged discussion, which followed this paper, emphasized the demand for good English from the *primary* grade to the high school. This paper was well received by the audience which evidently shared Miss Anderson's opinion in regard to the way that English should be taught in the grades.

M. W. Sampson, of Indiana University, gave a talk on Method of Teaching Comus and Merchant of Venice. He said there was no *one* way of teaching literature. The scope of literature was too great. He then proceeded to discuss Comus and Merchant of Venice according to a method which was received with marked appreciation by the audience. The speaker does not approve of Snyder's Commentaries on Shakespeare.

Owing to the lateness of the hour, no discussion followed this lecture.

The officers elected for the ensuing year were Geo. W. Hufford, principal of Indianapolis high school, president; A. B. Milford, of Wabash College, vice-president; Miss Clara A. Mering, Richmond high school, secretary.

Several of the sections of the State Association have failed to send any report of their meetings to the JOURNAL for publication. For the sake of future reference, the officers of the different sections are here-with given:

COLLEGE SECTION.—President, Scott Butler, Butler; vice-president, L. J. Aldrich, Union Christian; secretary, A. S. Hathaway, Rose Polytechnic; treasurer, W. E. Henry, Franklin.

ACADEMY OF SCIENCE.—President, Stanley Coulter, Purdue University; vice-president, Thomas Gray, Rose Polytechnic; secretary, John S. Wright, Indianapolis; assistant secretary, A. J. Bigney, Moore's Hill College; treasurer, W. P. Shannon, Greencastle.

LIBRARY ASSOCIATION.—President, Rollin Kutz, of the library department of the Bowen-Merrill Company; James Hasherbranner, of the

New Albany Public Library, vice-president, and Miss Mary Eileen Ahern, of Indianapolis, secretary.

MATHEMATICAL SECTION.—President, Professor Studley, Wabash College; vice-president, Miss Baylor, Wabash High School; secretary, Miss Amelia Waring Platter, Indianapolis High School. Executive committee.—Chairman, W. P. Morgan, Terre Haute High School; Prof. F. H. Foster, Vincennes University; Prof. Thrasher, Butler College.

SCHOOL OFFICERS.—President, B. K. Kramer, Lafayette; vice-president, B. F. Johnson, Fowler; secretary, W. F. Byrket, Knightstown; treasurer, G. W. Bingham, Montmorenci.

MUSIC SECTION.—President, H. E. Owen, Terre Haute; vice-president, R. S. Moore, North Vernon; secretary, Miss Laura Jennings, Lawrenceburg; executive committee, W. E. M. Browne, Knightstown; Miss Blanche Williams, Columbus.

CLASSICAL SECTION.—President, A. I. Dotey, of the Indianapolis High School; vice-president, Prof. H. A. Hoffman, of the Indiana University; secretary and treasurer, Miss Cora Bennett, of the Marion High School.

COUNTY SUPERINTENDENTS.—President, W. W. Pfrimmer; secretary, H. W. Curry.

THE CULTURE EPOCHS.

CHAS. A. M'MURRY, NORMAL, ILLINOIS.

Dr. John Dewey, in the January number of the *Public School Journal*, has given an important contribution to the discussion of the "Interpretation of the Culture Epoch Theory." He is not inclined to deny a general correspondence in the epochs of development of child and race but seeks for a more definite and limited application of the theory.

So far as I can see at present, I am willing to accept Dr. Dewey's statement that "the standard, educationally, is the sequence in the child not in the race," again, "but the criterion comes back in all cases to the child himself." In the sense here implied, I am willing to regard the child's activities and growth as the controlling thought—the center. (This however does not in my judgment settle the question whether history and literature or some other study or group should form the center of the school course.) The value of any epoch, therefore, will depend upon the degree of its correspondence to the child's present needs. Having established this central position and importance of the child, Dr. Dewey

seems to desert it in his first argument. He says—"Here is the Nomadic epoch and some (hypothetical) interest now corresponding. Shall we then make this interest supreme and study that epoch? Or shall we recognize the *relative* part played by pastoral activities in *present* society—the grazing in Texas, in Dakota, etc., and then call attention to the fact that whole peoples once lived in that way." On what ground here does Dr. Dewey substitute, without argument, "present society" for the child's interest and the child's psychology? His fundamental assumption is that the child's need is paramount. Why, then should the accidents of present society, grazing in Dakota and Texas, determine what a child's education shall receive? Even if the nomadic tendency were entirely absent in present society, it is supposable that the child's instinct and activities at some epoch may call for it. In any case it is an open question how far present society furnishes the activities and materials best suited to the child's needs. It is the best illustrations of any culture epoch, viewed from the standpoint of the child, which are needed and not the poor examples which the past or the present may furnish. The discussion of the point leads to a definite clearing up of the whole problem of education on its two important sides. First, the critics of the culture epochs' theory insist that we shall not impose that theory and its products upon the child, but examine the child's activities and needs at any age and make this the basis of all experiment with educative materials. I accept this proposition. A second set of critics of the culture epochs' theory comes in and demands that present society and the *relative* part played by certain activities in present society shall determine their value for the child. I reply, Hands off! First find out what present society has to offer that the child needs. If the child is the center, the argument against imposing materials on him is just as strong on one side as on the other. Present society just as past history has a great many things for which the child has no use at all.

It is not denied in the least that present society must exert an enormous influence upon the child. It is only claimed that the past with its beginnings and simple typical forms of all our elements of culture may, after all, supply many of the best products suited to the child's instincts and needs and

adapted to best prepare him for his activities in society. We are the outgrowth of the past and yet destined never to outgrow it. Its influence is immanent in everything we do and think and have. Yet the pedagogical materials suited to mediate the growth of child activities may be in the past as much as in the present. We may seem to have set into too much prominence a casual (perhaps incidental) statement of Dr. Dewey relative to present society. Be this as it may, the two parties in the coming controversy over this question will soon reveal themselves, first as the advocates of the present with its immediate, direct influences. The child stands in the midst. The dominant influence in his life and growth may be one or the other, the past or the present, or it may be, better still, the combined effect of the two in equal strength. The theory of the culture epochs suggests a sifting out process by which we may get at those best culture products of the past which have a distinct pedagogical value in the development of child activity.

The second chief point made by Dr. Dewey is in the discussion of culture products versus child activities. His words are, "Admitting the correspondence in general *and as verified and controlled by the study of present* child-life, how is the influence justified that it is the cultural products which are to be made the objects of study. This inference is simply taken for granted by the upholders of the theory, etc." Again, "Whatever words be used the point is that the interest and instinct correspond not primarily to the products of a given age but to the physical conditions which originated these products, secured for the child, then he is prepared to deal educatively with the products."

His treatment of this point raises, in my judgment, the most difficult and important question in this whole discussion. The point lies in the significance imputed to or denied to the cultural products of history and literature. This paper does not furnish sufficient room for the discussion of this question but a few remarks will be made upon it. In the first place, it will have to be admitted that a child's first perceptions of nature and of society are gained by the activity of his senses and mind as directly affected by his environment. He has six years of this sort of constant and many-sided influence

from his environment before he enters school, with comparatively little direct influence from history and literature. When he comes to approach literary products in school he already has this active body of apperceiving materials. The practical question for teachers (apart from the kindergartens) is, How shall the approved culture products (tested with children) be used? And to what extent do they furnish a legitimate and adequate field for child activity? So far as I can judge, Dr. Dewey seems to ignore the distinction between the "literature of power" and the "literature of knowledge." But I shall have to break off the discussion at the threshold.

HERBARTIANISM APPLIED.

W. P. BURRIS, SUPT. BLUFFTON PUBLIC SCHOOLS.

DIFFICULTIES.

1. *Paucity of Culture Materials in the School Text-books*—From the discussions in current educational literature and professional gatherings, it would seem that many persons see little more in Herbartianism than the "correlation of studies." Even this is regarded as but an emphasis of a principle which has always been practiced more or less. Whatever the origin of such an impression, let it be remembered that the "correlation of studies" is of secondary consideration; *i. e.*, back of this relating and combining of the different forms of school discipline, for the purpose of centralization and strengthening their combined effect, is the question, what is to be related and combined? This system does not attempt to build the new by simply re-arranging the old materials of the curriculum. As well try to build the marble palace from the log cabin by re-arranging the logs. It calls for materials which are essentially different from those which have constituted the bulk of the public school curriculum hitherto. It raises the question, which are *best?* *not* which are good? All of the subject matter of instruction must be re-examined in the light of new principles, and, as is to be expected, much that was worthy in the old will be found worthless in the new.

So long as it is held that, "it does not make so much differ-

ence *what* pupils should study as *how*," we will be perfectly satisfied with the subject matter of our text-books if only our method be skilful. We may feel a sort of self-satisfaction similar to that of a surgeon who had witnessed a difficult surgical operation. When asked if the person who had undergone the operation got well, "No," said the admirer of skilful method, "but the operation was brilliant." The position which regards education as a matter of method *primarily* is as absurd as that of the surgeon just referred to. Had the skill of the surgeon been coupled with adequate means the life had been saved. So, also, if our skilful method be coupled with adequate means the lives and eternal destiny of those committed to our care will be secure. The position which would regard education as more a question of means than method would be equally absurd. It is a question of *both*. Excellent means and poor method will do much. Likewise poor means and excellent method will accomplish great things. But greater than either of these conditions is that in which the *best means* are employed according to the *best method*. Education, then, is primarily, a question of means as determined by the central aim of education, and secondarily, a question of method. We must first select the means before we have that which we are to methodize.

The new movement grants that the life of the individual unfolds by its own "self-activity," but it does not consider all subjects as of equal importance in stimulating this "self-activity." With the central aim of education clearly fixed in mind, it sets out under the glare of "Apperception," "Theory of Culture Epochs," and "Theory of Interest" and sweeps the world for the best educative means for the public school curriculum. When these search-lights are turned on the ordinary school text-books, behold, how barren!

Here, then, is a serious difficulty which confronts the Indiana school teacher in the application of Herbartianism. *We do not have the opportunity to choose the best means.* We are handicapped by being compelled to use a series of text-books which were prepared and selected without any reference to the principles of this new movement. The mistake was in not adopting a course of study before selecting the text-books which are designed to carry out the course of study. True,

we can buy supplementary books, but when these are purchased in addition to those prescribed by law it becomes expensive. Furthermore, in most school corporations there are not sufficient funds to equip the schools with the needed historical and literary materials, even assuming that school boards would be willing to expend them for this purpose. Patrons, too, will generally buy what the law requires and cannot be relied on to make additional expenditures. For the good of Indiana it is to be hoped that the next legislature will repeal the present school book law and enact another giving us free text-book with optional selections. We may then choose the best, and school boards may select or publish books up to their plan of instruction. There need not be uniformity of books throughout the state, for the boy who goes from one place to another will simply leave the books which he has used in the one and take up those provided for him in the other. With the adoption of a course of study on which there is substantial agreement there will come a way by which we can have the equipment necessary to carry it into successful practice. In the meantime, much can be done by the aid of libraries, local purchases out of the special fund, and by the substitution of the teacher for the text book in a large measure.

2. *Lack of Trained Teachers*—The search for the best educative means is still going on. Invaluable discoveries are being made but there are mines which have not been operated. When we shall have assayed the world's educational ore in the crucible of reason and shall have selected the purest gold, our task is only half done. The question still remains, how shall we use it? Here we come to the field of method, and Herbartian pedagogy is as deeply concerned with this as with that which is to be methodized. The one who can successfully use the best means in realizing a given aim is a *master*. Education becomes a profession just in proportion as we become such masters. The teacher in an early day was called "master," but in a different sense. He would not be a master now. What, briefly, is the training necessary for carrying the system into successful practice?

(a) *A liberal culture*—The very idea of culture epochs in racial development to which epochs in individual development

are in a certain sense analogous, demands that the teacher shall have made a discriminative study of the world's culture. To teach others to come into intelligent relations with their physical environment and to understand the drama of creation, the last act of which was ushered in with human speech, the teacher must have studied the sciences. To be able to teach the arts of expression the teacher must be an artist.

(b) *An accurate knowledge of psychology*—In addition to psychology in general of the adult mind, there should be a knowledge of the *developing mind*. It is to be hoped that the present movement in child study which is so promising in results will not stop until it covers the entire period from infancy to manhood. How else can we adapt means to the several marked stages in the child's development?

(c) *A thorough knowledge of both general and specific method.*

(d) *Experience under critical supervision in a training-school.*

We have briefly mentioned these qualifications because superintendents and teachers alike are apt to ascribe failures to causes other than their own short-comings. And, such there may be, but if other educational ideals demand professionally trained teachers, much more one which is so lofty as that now proposed. The difficulties here may be met in a measure by teachers pursuing such a line of professional study as that pointed out by the National Herbart Society from time to time, and a line of general culture based on the world's literary masterpieces and contemporaneous history. When these two main sources of difficulty are provided for, those that remain will gradually disappear. It is hardly necessary to say that too much is not to be expected from the new movement immediately. Only in the measure in which teachers have had an adequate professional training, sympathetic appreciation of the needs of pupils, and supplied with the necessary equipment will they be able to carry out such a scheme of instruction. Where attempted, however, success has been sufficiently gratifying to amply justify continuance in the path pointed out by this angel which has come to roll away the stone of the sepulcher of formalism in which public school education has been entombed.

We shall discuss practical results in the next paper.

SHAKESPEARE—ANALYSIS OF HENRY VIII.

JONATHAN RIGDON, OF CENTRAL NORMAL.

ACT II.

Scene I.—All the incidents of this drama cluster about three great events. The fall of Buckingham, the divorce of Henry and Catherine, and the fall of Wolsey. Whether or not there is a unity of purpose binding together these three events it is not the purpose of an analysis to show. Only the first of the three great events is suggested in the first act. Also the first part of the opening scene of the second act is concerning the fall of Buckingham. Two gentlemen meet in a street of London and talk of Buckingham. They discuss the question of his guilt and narrate in some detail the incidents of his trial. They tell us that the great Duke demanded that his accusers should be brought *viva voce* to his face.

"At which appeared against him his surveyor;
Sir Gilbert his chancellor; and John Carr,
Confessor to him with that devil-monk,
Hopkins, that made this mischief."

"All these accused him strongly;"

"And so his peers, upon these events,
Have found him guilty of high treason. Much
He spoke, and learnedly, for life; but all
Was either pitied in him or forgotten."

They tell us that Buckingham was angry in the first of his speech before his accusers, but that

"In all the rest he showed a most noble patience."

He grieved not at death, but at the way in which it came upon him. These gentlemen threw a little more light on the deep-laid scheme of Wolsey. They tell us that he was the cause of Buckingham's sad fate. Wolsey accomplished it in this way. By some means he brought disgrace upon Kildare, then deputy of Ireland, and when he was shut up in prison, he sent the Earl of Surrey thither to take his place, so that Surrey could not help his father-in-law, Buckingham.

"That trick of State was a deep, envious one,"
and it was a common trick with Wolsey. They give us further light also upon the standing of these two great men with the people. They tell us that the commons hate Wolsey perniciously and as much love and dote on Buckingham,

"The mirror of all courtesy."

Here comes Buckingham to his execution.

"Stay there, sir,
And see the noble, ruined man you speak of."

Buckingham, like all the other tragic characters of this play, manifests his true greatness most conspicuously in his fall. He knows he has been deeply wronged, and although innocent, must die a traitor's death. Under such circumstances, it is only the truly great man that can say to his enemies,

"Be what they will, I heartily forgive 'em."

But in the mind of Buckingham there was evidently a struggle between forgiveness and hatred, for in the same breath he warned his enemies

"Yet let them look, they glory not in mischief,
Nor build their evils on the graves of great men;
For then my guiltless blood must cry against them."

Further the conflict rages:—

"I forgive all;
There cannot be those numberless offences
'Gainst me that I cannot take peace with: no black envy
Shall mark my grave."

"Yet I am higher than my base accusers,
That never knew what truth meant: I now seal it;
And with that blood will make 'em one day groan forth."

Buckingham then relates the injustice that had been done to his noble father, and closes his speech with some valuable advice, and declares his faith in the philosophy that

"Heaven has an end in all."

At the close of this scene, we have in the conversation of these two gentlemen, the first suggestion of the second of the three great events of this play. One gentleman referring to the fate of Buckingham says:—

" 'Tis full of woe;
Yet I can give you inkling
Of an ensuing evil, if it fall,
Greater than this."

"Did you not of late days hear
A buzzing of a separation
Between the King and Catherine?"

Nor does this gentleman hesitate to say that Wolsey was the instigator of the divorce proceedings and even declares the motive that prompted him to work for the separation of Henry and Catherine.

" 'Tis the Cardinal;
And merely to revenge him on the Emperor
For not bestowing on him, at his asking,
The archbishopric of Toledo."

In understanding this speech, it must be remembered that Cardinal Wolsey had been a candidate for the Papal chair, but had been defeated by Clement. As compensation for this loss, he expected and probably was promised some favors from the Emperor, Charles V of Spain, who was the nephew of Catherine, and as these favors were not forth-coming, Wolsey set about by his far-reaching and nefarious scheme to bring about the separation of Henry and the Queen. For what purpose, we shall find out in the next scene.

Scene II.—In this scene the conversation carried on by Lord Chamberlain and the Dukes of Norfolk and Suffolk, gives us very concisely the material from which Shakespeare intends us to infer the cause of the divorce proceedings. Why Henry sought a divorce from Catherine is, and always has been, a much disputed question.

Nor.—

"What's the cause?"

Cham.— "It seems the marriage with his brother's wife
Has crept too near his conscience."

Suf.— "No his conscience
Has crept too near another lady."

I think from the play itself, as well as from history, we may be safe in concluding that each of these alleged causes influenced Henry. Norfolk here declares that this is the Cardinal's doing and accuses Wolsey of breaking the league between England and Spain, and of sowing in the mind of Henry, doubts as to the validity of his marriage with his brother's wife. He further states that the main object of Wolsey is the marriage of King Henry with the French King's sister. Here he must follow Wolsey's plans. Since he need no longer look to Charles V of Spain for assistance, he seeks to divorce Catherine, the emperor's aunt, from King Henry, in the hope that if he can be instrumental in marrying Henry to the French King's sister, he may secure the assistance of France in the next election of a Pope. The conversation is taking place in an ante chamber in the palace. Chamberlain now goes to carry a message for the king. To whom, we shall learn later. Through a folding door, Norfolk and Suffolk see the king. He looks sad, much afflicted, and is not pleased that these dukes have thrust themselves into his private meditations. He dismisses them, and Cardinal Wolsey and Campeius enter his room. They are as welcome as the dukes were unwelcome.

"O my Wolsey,
The quiet of my wounded conscience;
Thou art a cure fit for a king."

Here the three discuss the divorce proceedings which are now to be directed by the two cardinals. Wolsey very shrewdly advises the king to allow scholars to argue the case of the Queen. The appearance of Gardiner, the king's new secretary, leads to a very instructive conversation between the two cardinals in which Campeius asks:

"My Lord of York, was not one Doctor Pace
In this man's place before him?
Believe me, there's an ill opinion spread, then,
Even of yourself, Lord Cardinal.
They will not stick to say you envy him;
And, fearing he would rise, he was so virtuous,
Kept him a foreign man still; which so grieved him,
That he ran mad and died."

Wolsey makes a plain confession to his confidential cardinal and tells why he prefers Gardiner to Doctor Pace.

"He was a fool; (Pace)
For he would needs be virtuous: that good fellow, (Gardiner)
If I command him, follows my appointment:
I will have none so near else. Learn this, brother,
We live not to be griped by meaner persons."

The king now suggests that Black Friars would be the most convenient place for such learned men to hold their court. He then closes

the scene with the following speech, which is hard for me to understand.—

"My Wolsey, see it furnish'd—O, my Lord,
Would it not grieve an able man to leave
So sweet a bedfellow? But conscience, conscience,
O, 'tis a tender place, but I must leave her."

I have already intimated that both the thought of the illegality of his first marriage and the fascinating charms of Anne Boleyn were factors in the cause of the divorce proceedings. But as King Henry becomes more and more under the spell of Anne, the conscience matter becomes more and more a mere pretext. It is likely, I think, that when King Henry spoke the words quoted above concerning Catherine, who was not beautiful or attractive in personal appearance, he had in mind the beautiful Anne, to whom he had sent Lord Chamberlain just a few minutes before.

Scene III.—Most of this scene is taken up with the conversation between Anne Boleyn and an old lady, both of whom are attendants upon the queen. It is perhaps the most humorous scene in the play, and is at the same time very pathetic. It gives us also most conclusive evidence of the goodness of Queen Catherine. In this scene her praises are sung by the woman who has already taken her place in the affections of her husband and is soon to be her husband's wife. Anne herself, says of Catherine:

"By my life she never knew harm doing."

Anne shows us that she herself is by no means destitute of those qualities she praises in Catherine. She truly sympathizes with the queen, and is sincere when she declares:

"By my troth and maidenhood I would not be a queen."

But she evidently does not understand herself or human nature in general as well as does the old lady who answers:

"In faith, for little England
You'd venture an embalming;"

and adds that she herself would for even a single country.

Lord Chamberlain enters and says to Anne:

"That you may, fair lady,
Perceive I speak sincere, and high note's
Ta'en of your many virtues, the king's majesty
Commends his good opinion of you, and
Does propose honor to you no less flowing
Than Marchioness of Pembroke; to which title
A thousand pounds a year, annual support,
Out of his Grace he adds."

Anne again commands our respect by her answer.

"I do not know
What kind of my obedience I should tender;
Yet prayers and wishes
Are all I can return."

We are pleased also with the impression that Anne makes upon Chamberlain, for he says aside:

"I have perus'd her well;
Beauty and honor are in her so mingled,
That they have caught the king."

Then comes the first prophetic suggestion of the great Queen Elizabeth.

"And who knows yet
But from this lady may proceed a gem
To enlighten all this isle."

There is in this scene also some of the soundest philosophy of life to be found in the play. For instance, Anne tells us in her opening speech that it is a thousand-fold more bitter to part with majesty and pomp than it is sweet to acquire them.

There are a number of suggestive passages in the scene, only a few of which I will include among the quotations from this second act.

Scene IV.—This is the trial scene and a very eventful one it is.

Wol.— "Whilst our commission from Rome is read,
Let silence be commanded."

King.— "What's the need?
It hath already publicly been read,
And on all sides th' authority allow'd;
You may, then, spare that time."

Here the king shows his impatience and his anxiety to get through with the business. The crier goes through the formality of calling Henry and Catherine into court. This is the second and last public appearance of Queen Catherine. She kneels at the feet of King Henry and pleads for justice and pity. She says that she is a poor woman among strangers. She asks him in what she has offended. She says she has been to him a true and humble wife, at all times conformable to his will, even choosing and dismissing her friends to suit his pleasure. She reminds him that to them have been born many children, and that all of these considerations should strengthen rather than break their marriage ties. She asks him to remember also that the legality of their marriage had already been sanctioned by her father and his, both of whom were wise princes, and finally asks him to delay the trial proceedings until she could be advised by her friends in Spain. Taken all together, it seems to me that a stronger plea could not be made in court in her behalf.

The two cardinals, Wolsey and Campeius, both answered that reverend fathers, men of learning and integrity, were there to plead for her and that the case should proceed without delay. At this the Queen's anger was aroused. She denounced the two cardinals and declared that they, her enemies, should not be her judge. Wolsey tells her that he is not at all to be blamed for the divorce proceedings and calls upon the king to verify his statement. Catherine continues to denounce Wolsey as a hypocrite, feigning meekness and humility for the purpose of practicing his rascality, and closes her speech with a public appeal to have her case brought before the Pope for judgment. She offers to depart. Campeius says she is obstinate and should be brought back. The king calls her again but she pays no heed to the call. She even

chastises her faithful servant, Griffith, for telling her she is called. The king here pays her one of the finest compliments ever passed upon a woman.

King.—

"Go thy ways, Kate:
That man i' the world who shall report he has
A better wife, let him in nought be trusted,
For speaking false in that: thou art, alone—
If thy rare qualities, sweet gentleness,
Thy meekness saint-like, wife-like government,
Obeying in commanding, and thy parts
Sovereign and pious else, could speak thee out—
The queen of earthly queens.—She's noble born;
And like her true nobility, she has
Carried herself toward me."

Wolsey again calls upon the king to exonerate him from blame in the divorce affair, at which the king publicly acknowledges that he has done,—and so he had always seemed to do,—everything he could to keep the matter from coming up. Then the king publicly, and I think truly, declares what prompted him to seek the divorce.

He says that his conscience was first pricked

"By th' Bishop of Bayonne, then French ambassador,
Who had been hither sent on the debating
A marriage 'twixt the Duke of Orleans and
Our daughter Mary."

This speech of the Bishops resulted in the investigation of the birth of Mary, which depended upon the legality of the marriage between Henry and his brother's wife. This, Henry says, troubled him greatly, and he thought it was a judgment sent upon him for the wrong he had committed in marrying Catherine. This belief was strengthened by the fact that all of his children, except his daughter Mary, were born dead or died soon after birth, and that gave him "Many a groaning throe," to think that his kingdom

"Well worthy the best heir o' the world, should not
Be gladdened in't by me."

For this grave reason, says Henry, he began to investigate the legality of their marriage. I say that here Henry speaks truly in saying that he doubted the legality of his marriage with Catherine and was truly superstitious enough to believe that the death of his children was a judgment, and he naturally desired to leave a legitimate child to be his successor to the throne and thus perpetuate his great reign and his great name.

In discussing the preceeding scene, I named the two factors in the case of Henry's divorce proceedings. They were, *conscience* and *Anne Boleyn*. But I would not have any one think for a minute that what Henry meant by conscience, was the still small voice within that prompted him to do right and avoid wrong. I would not have any one think for a minute that Henry VIII had a conscience in this sense. What he meant by conscience was simply the fear that his marriage

was illegal and that he would therefore leave no successor to the throne.

SUGGESTIVE PASSAGES FROM ACT II, HENRY VIII.

"Heaven has an end in all."

"Where you are liberal of your loves and counsels
Be sure you be not loose."

"'Tis better to be lowly born,
And range with humble livers in content,
Than to be perk'd up in a glistening grief,
And wear a golden sorrow."

"Our content
Is our best having."

ANALYSIS OF ACT III.

Scene I.—

Cath.— Take thy lute, wench, my heart grows sad with troubles;
Sing and disperse 'em, if thou canst.

These opening words of the third act show us Catherine as she is, a lone, grief-stricken woman, becoming weaker in mind and body day by day. A few of her women and servants are still with her. One of them announces the presence of two gentlemen, cardinals Wolsey and Campeius. Wolsey asks Catherine to withdraw into her private chamber that they may explain the cause of their coming; but she prefers to hear what they have to say in the presence of her household. Wolsey begins to address her in Latin, but she stops him and requests him to speak in English. She says she has not lived so long in his country without learning his language. Besides she suggests with keen sagacity—

"A strange tongue makes my cause more strange—suspicious."

Wolsey declares that his only aim is to do her service and service of his king. He praises her honor, pities her sorrows, and declares that he will not betray her. He then states that his business is to know

"How you stand minded in the weighty difference
Between the king and you."

Cardinal Campeius assures her that Wolsey has spoken the truth and that he,

"Offers, as I do, in a sign of peace,
His service and his counsel."

Catherine, after all her mistreatment, cannot help being sceptical. She believes they have come to betray her. She therefore thanks them for their proffered counsel and begs them to let her have time and counsel for her cause as she is a friendless, hopeless woman. But Wolsey assures her that her friends are infinite and that her fears wrong the king's love. Catherine answers him that in England, her so-called friends can be of but little profit, and that no Englishman, even if he desired to be her friend, would dare to act against the king's pleasure.

Campeius begs her to leave her grief and take his counsel and put her cause into the king's protection, telling her that if a trial of law

should overtake her, she would be parted from the king in disgrace. But Catherine still sceptical, says:

"Ye tell me what ye wish for both, my ruin:
Is this your Christian counsel? Out upon ye.
Heaven is above all yet; there sits a Judge
That no king can corrupt."

She continues to upbraid the two cardinals, telling them they ought to be holy men, cardinal virtues, but that in reality they are cardinal sins and hollow hearts. She utters the prophetic warning:

"Take heed, for heaven's sake, take heed, lest at once
The burden of my sorrows fall upon ye."

Then she shows them the inconsistency of putting her cause into the protection of the king who hates her.

"Alas, has banish'd me his bed already,
His love, too long ago."

This tells us what is historically true, that long before the separation Catherine had been simply occupying rooms in the king's palace and had been wife only in name. She had long ago been compelled to give up everything but her dignities, that is the name of Queen. This explains why she was so loth to give up the name even after she knew the reality was gone. Here she tells the cardinals how long she has lived with the king as his true wife, above suspicion, giving all her affections to him, loving him next heaven, obeying him, out of fondness, superstitious to him, almost forgetting her prayers to content him; and then asks them if it is well that she should be thus rewarded. From the very depth of her grief she exclaims:

"Would I had never trod this English earth,
Or felt the flatteries that grow upon it.
Ye've angels' faces, but heaven knows your hearts."

Now she thinks of her poor women—

"Alas, poor wenches, where are now your fortunes!
Shipwreck'd upon a kingdom, where no pity,
No friends, no hope; no kindred weep for me;
Almost no grave allow'd me; like the lily,
That once was mistress of the fields and flourished,
I'll hang my head and perish."

Here again Wolsey and Campeius beg her to be comforted and declare that they do not intend to harm her. They explain that there could be no reason for their doing such a thing, that the way of their profession is against it, and that their business is to cure sorrow, not cause it. Catherine is finally overcome by their skillful entreaties and surrenders her cause completely into their hands in the following beautiful speech;

"Do what ye will, my lords: and, pray, forgive me,
If I have used myself unmannerly;
You know I am a woman, lacking wit
To make a seemly answer to such persons.
Pray, do my service to his Majesty:
He has my heart yet; and shall have my prayers
While I shall have my life. Come, reverend fathers,
Bestow your counsel on me: she now begs,
That little thought, when she set footing here,
She should have bought her dignities so dear."

Scene II.—Here in an ante-chamber to the king's apartment in the palace, we may hear the duke of Norfolk, the duke of Suffolk, the earl of Surrey and Lord Chamberlain exult over the miscarriage of Wolsey's plans. All four of these men are Wolsey's enemies; but Surrey it seems hates him most, and is joyful to meet the least occasion to be revenged on Wolsey for the death of Buckingham, who was Surrey's father-in-law. Norfolk, Suffolk and Chamberlain seem to know about the failure of Wolsey's plans, and Surrey is a most eager listener to the story of how

"The king hath found
Matter against him that forever mars
The honey of his language."

Chamberlain is more cautious and still seems to fear the power of Wolsey. He says:

"What he deserves of you and me I know;
What we can do to him—though now the time
Gives way to us—I much fear. If you cannot
Bar his access to th' king, never attempt
Anything on him; for he hath a witchcraft
Over the King in's tongue."

Norfolk and Suffolk now tell how Wolsey has acted in a manner contrary to the king's desires in the divorce proceedings, and how

"The Cardinal's letter to the Pope miscarried,
And came to th' eye o' the king; wherein was read
How that the Cardinal did entreat his Holiness
To stay the judgment o' the divorce; for, if
It did take place, I do, quoth he, perceive
My king is tangled in affection to
A creature of the queen's, Lady Anne Boleyn."

To Surrey's delight, Chamberlain here says of Wolsey:

"But in this point
All his tricks founder, and he brings his physic
After his patient's death: the king already
Hath married the fair lady."

Suffolk says also that the order is given for the new queen's coronation. He praises her as a gallant creature, complete in mind and features, and predicts that from her will come some blessing to the land. He further tells how Cardinal Campeius has stolen away to Rome without taking leave of the king and without giving him any assistance in the matter of his divorce, but adds that Cranmer has decided the divorce in the king's favor, and that his decision has been confirmed by the famous colleges.

"Catherine no more
Shall be call'd queen, but princess dowager
And widow to Prince Arthur,"

and that for his assistance Cranmer is to be made arch-bishop.

Here we get our first positive knowledge of a conflict between Wolsey and the king. In the next division of the scene in which Wolsey and

Cromwell appear we learn from Wolsey himself why he ceased to work for the divorce and why he opposed Anne Boleyn.

"It shall be to the Duchess of Alencon,
The French king's sister: he shall marry her.
Anne Boleyn! No; I'll no Anne Boleyns for him."

We see, too, his almost sublime self-confidence and his complete independence of conscience. So insignificant a thing as virtue shall not stand between him and the accomplishment of his wicked designs. His soliloquy continues:

"The late Queen's gentlewoman, a knight's daughter,
To be her mistress's mistress! the Queen's queen!
This candle burns not clear: 'tis I must snuff it;
Then out it goes. What though I know her virtuous
And well-deserving? Yet I know her for
A spleeny Lutheran; and not wholesome to
Our cause, that she should die i' the bosom of
Our hard-ruled King."

Still we have not been told how the king came into the possession of the information that Wolsey was working against him. That we shall learn from the next division of this scene, in which the king himself takes an active part.

He tells Norfolk that it came about in this way. Wolsey sent the king some state papers to peruse, and by mistake included among them an inventory of his own personal wealth, which was so great that the king declared, "it outpeaks possession of a subject."

This incident is simply the invention, or rather the appropriation, of the poet. Wolsey never did such a foolish thing. But another man, a Bishop of Derham, at one time did, and Wolsey himself took advantage of it to accomplish the Bishop's ruin. It is dramatically, therefore, very fitting that the poet should make Wolsey perish by his own wicked methods. Wolsey, unconscious of the presence of any one else, is still musing and soliloquizing. The king observes him and says to the others:

"If we did think
His contemplations were above the Earth,
And fix'd on spiritual objects, he should still
Dwell in his musings: but I am afraid
His thinkings are below the Moon, not worth
His serious considering."

The king further tries his hand at sarcasm and hits it off pretty well as he says to Wolsey:

"Good my lord,
You're full of heavenly stuff, and bear the inventory
Of your best graces in your mind; the which
You are now running o'er: you have scarce time
To steal from spiritual leisure a brief span
To keep your earthly audit: sure, in that
I deem you an ill husband, and am glad
To have you therein my companion."

Then follows a long conversation between the king and Wolsey, in which Wolsey, not suspecting the king to be in the possession of his inventory or of his letter to the Pope, declares his loyalty to his master.

Then the king hands him the bundle of papers and tells him to read them. Wolsey first comes upon the inventory of his wealth and thus condemns himself:

" 'Tis so;
This paper has undone me: 'tis the account
Of all that world of wealth I've drawn together
For mine own ends; indeed, to gain the Popedom,
And free my friends in Rome. O negligence,
Fit for a fool to fall by! What cross devil
Made me put this main secret in the packet
I sent the king?"

But here, as so often before, the wonderful fertility of his invention comes to his rescue. He thinks of a way to clear himself in the sight of the king, but immediately his eye falls upon his letter to the Pope, which he has carelessly sent to the king and in which he has asked the Pope to delay the divorce proceedings. Then Wolsey knew that nothing could make amends for this, and so he gives up completely.

"Nay then farewell.
I've touched the highest point of all my greatness;
And from that full meridian of my glory,
I haste now to my setting: I shall fall
Like a bright exhalation in the evening,
And no man see me more."

In the next division of this scene we have a spirited quarrel of the Dukes of Norfolk and Suffolk and the Earl of Surrey with Wolsey. We have occasion to admire the greatness of Wolsey in being so courageous even after he had fallen, and we can not help but detest the littleness manifested by the dukes and Surrey in heaping their condemnation upon the head of a fallen man. Yet, if we knew the cause these men had for hating Wolsey, we might view their conduct in a different light. Certainly we can not much blame Surrey for remembering the fate of his friend and father-in-law, Buckingham.

Surrey makes from memory the following enumeration of charges against Wolsey. *First*, that he gleaned all the land's wealth by extortion into his own hands. *Second*, that he advised the Pope not to assist the king any further in the divorce proceedings. *Third*, that without the king's assent or knowledge he wrought to be a Legate. *Fourth*, that in all he wrote Rome or foreign princes he associated his own name with that of the king in such a way as to imply that the king was his servant. *Fifth*, that without the knowledge either of king or counsel, when he went ambassador to the Emperor, he carried into Flanders the Great Seal. *Sixth*, that without the king's will or the state's allowance, he sent a commission to conclude a league between his Highness and Ferrara. *Seventh*, that out of mere ambition he had caused his picture to be stamped on the king's coins. *Eighth*, that to promote his own interests he had sent untold wealth to Rome. Here Lord Chamberlain interposes and gives expression to what the reader has already begun to feel:

‘O, my Lord,
Press not a falling man too far. ‘Tis virtue:
His faults lie open to the laws; let them,
Not you, correct them. My heart weeps to see him
So little to his great self.”

The impulsive Surrey says, “I forgive him.” But this forgiveness comes so abruptly that one is inclined to doubt its sincerity. Suffolk further tells Wolsey that it is the king’s pleasure that all of Wolsey’s goods, lands, tenements, chattels etc., shall be forfeited to the state and that he himself shall be sent out of the king’s protection. Here they leave Wolsey to his private meditation. Hear the sad soliloquy of fallen greatness.

“Farewell, a long farewell, to all my greatness.
This is the state of man: To-day he puts forth
The tender leaves of hope; to-morrow blossoms,
And bears his blushing honours thick upon him;
The third day comes a frost, a killing frost,
And when he thinks, good easy man, full surely
His greatness is a ripening—nips his root,
And then he falls, as I do.”

A great change comes over Wolsey. In losing his life he finds it. It seems to be a rule that the sweetness and gentleness that lie dormant in the lives of powerful and haughty men can be brought out only by crushing those lives. Wolsey says to his friend:

“Never so truly happy, my good Cromwell.
I know myself now; and I feel within me
A peace above all earthly dignities,
A still and quiet conscience.”

Then at his request, Cromwell tells him the news, the worst of which is his own displeasure with the king. Next, that Sir Thomas More is chosen Lord Chancellor in Wolsey’s place, that Cranmer is returned with welcome and installed Lord Archbishop of Canterbury, last, that Lady Ann, whom the king secretly married long ago was soon to have her coronation ceremony performed. To this Wolsey answers that she was the weight that pulled him down, and that in that one woman he has lost forever all his glory. No more noble sentiments can be found than those with which Wolsey closes this scene in his address to his friend Cromwell:

“Mark but my fall, and that that ruin’d me.
Cromwell, I charge thee, fling away ambition:
By that sin fell the angels; how can man, then,
The image of his Maker, hope to win by ‘t?
Love thyself last; cherish those hearts that hate thee
Corruption wins not more than honesty.”

“Standing still” in any life work is *not* standing still. There is no such thing as standing still in *soul* work. One either goes backward or forward, retrogrades or advances. The teacher who felt that she had reached a plane of “well enough” when she entered the school-room as sole monarch of all she surveyed, has not even “held her own,” if her life and work and purpose show no evidences of growth. The vanguard becomes the rear guard quickly in these days when onward movement is the rule and not the exception in the educational world.
—*Primary Education.*

SCIENTIFIC TEMPERANCE.

DR. ELI F. BROWN.

Why should I not use tobacco? Because the nicotine of tobacco is a narcotic poison which injures every organ of the body with which it comes in contact. It spoils the blood by mixing poison with this life giving fluid, and thus stunts the growth of bone, muscle and nerve. It depresses the brain and causes dizziness, dulls the mind and makes the person nervous so that his hands are unsteady and the movements of his body are uncertain. It injures the stomach by weakening the muscles and poisoning the glands, thus it causes dyspepsia. It taints the breath, discolors the teeth and stains the skin by its dark juices. It weakens the heart, for the heart is muscles and nerves, and thus it produces irregularity and palpitation of heart beat. It destroys the sensitiveness of taste and smell and dims the sight, because narcotic poison blunts these nerves of special sense. It obstructs the liver, influences the kidneys, weakens the lungs and makes the skin sallow and inactive: for these four delicate organs in doing their best to throw this poison out of the body are themselves injured by it.

Why should I not smoke cigarettes? Because they contain the poison of tobacco along with other hurtful substances. They appear like innocent play things but they would better be called "white coffin nails." To children and young men who use them, cigarettes are slow but sure death to both body and mind. The great danger is in forming the habit of smoking cigarettes, and it is the beginning to do so that is the first step in forming this dreadful habit. Boys who smoke cigarettes quickly begin to fall behind their fellows in class standing, and men who use tobacco never take the honors of their classes in college. Men and boys are blunted by tobacco. Weakened in body and mental activity they fall short of acquiring the power and culture they might otherwise attain. Though they are not killed outright by the poison, they undergo slow self-destruction by using tobacco.

How does the narcotic effect the nerves? From the brain and other centers the minute nerve fibers extend to the skin

and other parts so that we can feel what touches or effects these portions. These nerves of feeling end in soft loops or sacs filled with fluid and having the most delicate of covers. If these ends of touch are pressed upon or heated or affected in any decided manner they give alarm and we feel what is going on at these nerve ends. Narcotic substances come in contact with these tender touch-sacs, make the delicate coverings more tough, wrinkle the thin walls, squeeze out or draw out some of the fluid, and thus destroy or deaden the nerve ends so that they cannot feel and cannot give the alarm. When the narcotic is removed or exhausted the nerves recover their feeling but are more or less inflamed from the injury they have sustained. They call for more narcotic to make them quiet again. By repetition the nerves become accustomed to the poison and demand its constant use. The person feels he must have his narcotic to keep his injured nerves quiet, and, as the narcotic gives him rest, he yields to its influence however injurious he may know it to be. Thus it is that the natural sensitiveness of the nerves is destroyed and the habitual use of the narcotic is fixed; nervous weakness has taken the place of natural nervous vigor in the life of the person. As the nerves become less and less sensitive to the effects of the poison the quantity required to produce the sought for effect is increased, hence the demand for the narcotic grows with use.

What other narcotic beside tobacco is much used by men? The most common is alcohol, which forms the active element in intoxicating drinks. Alcohol is a liquid, clear like water, very volatile, having a pungent taste and sweetish odor, and which burns with a pale, smokeless flame producing great heat. Alcohol is made by the fermentation of sugar. Thus the sweet juice of grapes or apples, when kept at a moderate temperature in the open air, undergoes such a change that the sugar of the juice is decomposed into a gas which comes bubbling out, and alcohol which remains mixed in the water. The juice ceases to be sweet because the sugar has become gas and alcohol. Before the fermentation of the sugar, the juice was delightful to drink, but fermentation has made alcohol in the juice, and this alcohol is a narcotic poison. In this way sweet cider from apples becomes hard cider, and the

juice of grapes becomes wine, in both of which, the hard cider and the wine, poisonous alcohol has taken the place of the sugar.

Alcohol is also made from grains such as barley, rye, and corn. These grains are rich in starch, but by fermentation the starch is largely turned to sugar, and the sugar is turned to alcohol. In fermenting the grains, they are moistened so as to start them to grow, then checked in their growth, dried and ground into coarse meal. This meal is called malt. The malt is mixed with water and fermented. The liquor thus formed is called beer. The grains, so excellent for food, have thus been used to produce a poisonous drink. The wine from the grapes has the color and odor of the grapes and is pleasing to the taste; the beer from the grains has many substances in it which are agreeable to persons who like it, but both the wine and the beer contain alcohol which is a narcotic poison.

PRIMARY DEPARTMENT.

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RULES FOR SPELLING.

Many as are the exceptions to the rules for spelling in English there are many more words that come under the rule. There are a great many classes of words that can be separated into two divisions. The words of one of these groups follow a certain general plan in their spelling; there is a law that determines whether the final letter shall be doubled or omitted. The words of the other class do not follow any such rule but are as we say exceptions to it. If there are twenty words of a certain class and ten of these follow the rule and ten do not, only eleven points need be learned and those are the rule for the ten and the ten exceptions. If the words are learned entirely isolated then there are twenty things to be memorized. So if there are as many exceptions to the rule as the rule covers even then it is an economy of energy and time to learn the rule.

There are several ways of teaching these rules. One

helpful way is to have the pupils select the words from memory and from books that belong to the class to be studied. Suppose the point to be noticed is the disposition of the final silent e when the words take a suffix. The pupils will find a long list of words, as bake, rake, love, live, like, take, create, drive, notice, change, make, charge, manage, singe, swinge, tinge, dye, courage, and a great many more. In these words given they will quite readily find that bake, rake, love, live, like, take, create and drive drop the e on taking a suffix beginning with a vowel.

They also find that notice, charge, manage and change drop e on adding ing but retain the e when adding able, as noticeable, and manageable, changeable, so, too, when ous is added to courage, it is courageous, the e being retained. This is the place to see that the tendency is to make c and g hard before a and o and the e is retained to preserve the soft sounds of these letters when the suffix begins with a or o. This, then, helps to settle the difficulty in spelling these words.

But in singe (ing), swinge (ing), tinge (ing), and dye (ing) the e is also retained. In these cases if the e were dropped the words would be identical with sing(e)ing, swing(e)ing, ting(e)ing, and dy(e)ing and confusion would arise. So in these cases the e is retained to preserve (in three of the case) the soft sound of g (which is hard in the other words) and to insure against confusion of meanings between dying and dyeing. So what have seemed to be exceptions to the rule have, after all, been found to conform to another one and after these distinctions are once clearly seen there will be little difficulty with these words again.

This work should be directed carefully by the teacher and one of the complex formulated rules should not be put before the class to learn but it should be worked out by the class before being formulated. This work should be largely a matter of discovery for the pupil.

Many times the question is asked as to where these rules of spelling can be found already formulated. In some of the editions of Webster's Unabridged Dictionary they are given in the beginning of the book, but they are not given in all. But for the convenience of these who have not the advantage of that dictionary I will give some of the most important ones.

RULES FOR SPELLING CERTAIN CLASSES OF WORDS.

1. Monosyllables and words accented on the last syllable, ending in a single consonant (except *h* and *x*) preceded by a single vowel, double that consonant when adding a suffix beginning with a vowel: as, *clan*, *clannish*; *plan*, *planned*, *planning*, *planner*; *bag*, *baggage*; *hot*, *hotter*, *hottest*; *wit*, *witty*; *cabal*, *caballer*; *abet*, *abetted*, *abetting*, *abettor*; *begin*, *beginning*, *beginner*; *infer*, *inferred*, *inferring*. The consonant is doubled in these words in order to preserve the short sound of the vowel, as otherwise the latter would be liable to be pronounced long. Thus, *planned*, *hottest*, and *abetted*, would naturally be pronounced *planed*, *hotest*, and *abetted*, if the consonant were not doubled. Words of this class, in which the final consonant is preceded by *qu*, followed by a single vowel, form no exception to the rule, since the *u* performs the office of the consonant *w*: as, *squab*, *squabbish*, *squabby*; *squat*, *squatting*, *squatter*; *quit*, *quitted*, *quitting*; *acquit*, *acquitted*, *acquitting*.

2. When a diphthong, or a digraph representing a vowel sound, precedes the final consonant of a word, or the accent of a word ending in a single consonant falls on any other syllable than the last, or when the word ends in two different consonants, the final consonant is not doubled in derivatives formed by the addition of a termination beginning with a vowel: as, *daub*, *daubed*, *dauber*; *need*, *needy*; *brief*, *brieger*, *briefest*; *revel*, *reveled*, *reveling*; *travel*, *traveling*, *traveler*; *profit*, *profited*; *act*, *acted*, *actor*; *perform*, *performer*; *stand*, *standing*. The final consonant is doubled in the derivatives of a few words ending in *g*, in order to diminish the liability of its being pronounced like *j*, before *e* or *i*: as, *humbug*, *humbugged*, *humbugging*; *periwig*, *periwigged*.

3. Derivatives formed from words ending in a double consonant, by adding one or more syllables, commonly retain both consonants: as, *ebb*, *ebbing*; *odd*, *oddly*; *stiff*, *stiffness*; *fell*, *fellable*; *skill*, *skillful*, *skillfulness*; *will*, *willful*, *willfulness*; *dull*, *dullness*; *full*, *fullness*: So also the double *l* is retained in the words *installment*, *inthrallment*, *thralldom*, and *enrollment* (from *install*, *inthrall*, *thrall*, and *enroll*), in

order to prevent a false pronunciation if spelled with one l. The derivatives of pontiff are exceptions to the rule, being written with only one f: as, pontific, pontifical, pontifical, and the like. One l is also dropped in a few words formed by adding the termination ly to words ending in ll, in order to prevent the concurrence of three l's: as, ill, illy; dull, dully; full, fully.

4. In derivatives formed from words ending with silent e, the e is generally retained when the termination begins with a consonant: as, pale, paleness; hate, hateful; incite, incitement; chaste, chastely, chasteness; move, movement. When, however, the e is immediately preceded by another vowel (except e), it is often dropped from the derivatives: as, due, duly; argue, argument; true, truly; awe, awful; and the derivatives and compounds of these words. The words wholly, nursling, wisdom, abridgment, acknowledgment, lodgment, judgment, and the compounds of some of these, are exceptions. The last four, however, are written by many authors, abridgement, acknowledgement, lodgement, and judgement.

5. In derivatives formed from words ending in ie, by adding the termination ing, the e is dropped, and the i changed to y, in order to prevent two i's from coming together: as, die, dying; hie, hying; lie, lying; tie, tying; vie, vying.

6. In derivatives of words ending in y, preceded by a consonant, and formed by appending any termination except one beginning with i, the y is usually changed into i: as, icy, iciest; icily; mercy, merciless; tidy, tidiness; modify, modifies; foggy, fogginess; earthy, earthiness; pity, pitiful. The derivatives of adjectives of one syllable ending in y, preceded by a consonant, are exceptions, and usually retain the y: as, shy, shyness; sly, slyest; dry, dryly; spry, spryer, spryest; wry, wryness. But the adjectives drier, and driest, from dry, are commonly written with i instead of y. Derivatives formed by adding the termination ship, as secretaryship, suretyship, ladyship, and the like, also retain the y, though some authors write them with i, according to the rule. The words babyhood and ladykin are likewise exceptions. The y is also retained in the possessive case singular of nouns, when

formed by adding s with the apostrophe: as, country's everybody's.

7. Derivatives formed by affixing a termination to words ending in y preceded by a vowel, generally retain the y unchanged: as, gay, gayety, gayly; play, player, plays; sway, swayed; obey, obeying; joy, joyful; enjoy, enjoyed; buy, buying; gluey, glueyness. The words daily, laid, paid, said, saith, slain, and staid (from day, lay, pay, say, slay, and stay), with their compounds, are exceptions. Staid, however, is sometimes written stayed. Derivatives from nouns ending in uy, as colloquies, from colloquy, are not exceptions to the rule, as u, in such cases, is not strictly a vowel, but stands for the consonant w.

8. In derivatives formed from words ending with silent e, when the termination begins with a vowel, the e is generally omitted, except in the cases mentioned in the next paragraph: as, bride, bridal; guide, guidance; plume, plumage; use, usage; grieve, grievance; come, coming; shape, shaping; move, movable; sale, salable; fleece, fleecy; force, forcible; true, truism. The e is retained in the words hoeing, shoeing, and toeing (from hoe, shoe, and toe), in order to prevent a doubt, as to the pronunciation, that might arise in case it were omitted. It is retained, also, in the words dyeing, singeing, springeing, swingeing, tingeing, (from dye, singe, springe, swinge, tinge), to distinguish them from dying, singing, springing, swinging, tinging (from die, sing, spring, swing, ting). The word mileage, as commonly written, does not omit the e, though it is sometimes, and more correctly, spelled milage. The e, standing in a derivative, before a termination beginning with a or o, and immediately after c or g, is retained in order to prevent the pronunciation of these consonants with the hard sound; as, peace, peaceable; notice, noticeable; manage, manageable; change, changeable; advantage, advantageous; outrage, outrageous; mortgage, mortgageor.

9. Derivatives formed by prefixing one or more syllables to words ending in a double consonant commonly retain both consonants: as, tipstaff, rebuff, befall, inthrall, disinthrall, foretell, undersell, fulfill, enroll, emboss (from staff, buff,

fall, thrall, tell, sell, fill, roll, boss). The word until is an exception, being always written with one l.

10. Nouns ending in y preceded by a consonant form their plural by adding es and changing y into i: as, mercy mercies; lady, ladies; sky, skies; army, armies; pity, pities. This rule includes words ending in quy, in which u, being pronounced like w, is strictly a consonant: as, colloquy, colloquies. The plural of proper nouns ending in y preceded by a consonant, is formed by changing y into ies, according to the rule: as, "The three Maries." Many writers, however, form the plural of such words by simply adding s: as, "The three Marys;" but for this practice there seems to be no good reason. When the singular of a noun ends in y preceded by a vowel (except u having the power of w), the plural is regularly formed by adding s only: as, day, days; key, keys; money, moneys; attorney, attorneys; alloy, alloys; guy, guys. Some plurals of the latter class are often inaccurately written with the termination ies: as, monies, attornies, and the like.

NOTE.—Nouns now ending in y formerly ended in ie, and formed their plurals regularly by adding s: as, memorie, memories; mercie, mercies. Y was finally substituted for ie in the singular, but the plural was not changed, and still retains its old form.

11. The plurals of a few nouns ending in f or fe are irregularly formed by changing f or fe into ves. The following words, with their compounds, are the principal examples. namely, life, lives, knife, knives; wife, wives; leaf, leaves; sheaf, sheaves; loaf, loaves; beef, beeves; thief, thieves, calf, calves; half, halves; elf, elves; shelf, shelves; self, selves; wolf, wolves. The plural of staff is sometimes written staffs, but more commonly staves, except when it means a corps of officers, either military or civil, in which sense it is always written staffs. The plural of wharf is generally written wharfs in England; in the United States it is more commonly, but improperly, written wharves, as it is also by some recent English writers. The plurals of hoof and turf, formerly written hooves and turves, are now written hoofs and turfs. The plurals of other nouns ending in f, fe, or ff, are formed regularly by the addition of s only.

12. Many words adopted from foreign languages retain their original plurals: as, datum, data; criterion, criteria; genus, genera; larva, larvae; crisis, crises; matrix, matrices; focus, foci; monsieur, messieurs. Many words of this class while retaining their original plurals, have also a second, formed after the analogy of English words of similar termination: as, formula, formulae or formulas; beau, beaux or beaus; index, indices or indexes; stratum, strata or stratums; bandit, banditti or bandits; cherub, cherubim or cherubs; seraph, seraphim or seraphs. The plurals of the last two words are sometimes incorrectly written cherubims and seraphims, with double plural terminations, from ignorance or forgetfulness of the fact that in Hebrew words *im* is a plural ending.

13. The letters *f* and *l*, at the end of monsyllables, and standing immediately after single vowels, are generally doubled: as in staff, cliff, doff, puff; all, bell, hill, toll, null. The words clef, if, of, pal, and sol are exceptions.

14. The letter *s*, at the end of a monsyllable, and standing immediately after a single vowel, is generally doubled, except when it is used to form the possessive case or plural of a noun, or the third person singular of a verb: as in grass, press, hiss, moss, truss. The only important exceptions are as, gas, has, was, yes, gris, his, is, thus, us.

15. A consonant standing at the end of a word immediately after a diphthong or double vowel is never doubled. The words ail, peat, haul, door and maim, are examples. The word guess is only an apparent exception, as the *u* does not strictly form a diphthong with the *e*, but serves merely to render the *g* hard.

16. In derivatives formed from words ending in *c*, by adding a termination beginning with *e*, *i*, or *y*, the letter *k* is inserted after the *c*, in order that the latter may not be inaccurately pronounced like *s* before the following vowel: as, colic, colicky; traffic, trafficked, trafficking trafficker; talc, talcky; zinc, zincky.

"Let reverence of law be breathed by every mother to the lisping babe that prattles in her lap; let it be taught in the schools, seminaries and colleges; let it be written in primers, spelling books and almanacs; let it be preached from pulpits and proclaimed in legislative halls and enforced in courts of justice; in short, let it become the political religion of the Nation."—*Abraham Lincoln*.

LEND A HAND.

(This department is conducted by Mrs. E. E. Olcott.)

“Look up and not down
Look forward and not back
Look out and not in;
Lend a hand.”

RAISING BIRDS.

There are many things worth knowing that cost too much in time, labor, or money to learn at first hand. Among the suggestions for studying birds given last month, were the questions: How many eggs does the canary hen lay before she sits? How long must she sit to hatch them? What do the young birds eat? How are they fed?

The thought occurred to me that many teachers and pupils cannot answer these questions nor conveniently consult a person who can help them. In my own teaching it frequently happens that I cannot afford the time to acquire facts which I could use to great advantage if they were at hand. So it is the Golden Rule that suggested the sketch of the family life of canaries. I have never owned a bird, but was so fortunate as to know a lady who made her pin money selling young canaries. In one season, selling the birds at only one dollar a pair, she received twenty dollars. She observed her birds very closely from the double motive of affectionate interest and an eye to the fact that each pair of baby birds brought safely to maturity, meant a dollar. It will be interesting for those who have cared for families of canaries, to compare their observations with those of my informant. As for me, *“I tell you the tale as to me it was told.”*

A FAMILY OF CANARIES.

“About the middle of February my birds begin nest-building. They use bits of paper, cloth, strings or any material they can lay their bills on. I do not like to give them strings because they are apt to tangle their feet. They do not seem to try to weave a nest but only to line one. I give them a cocoanut shell to build in. I first line it with cotton; then cover the cotton with canton flannel, and glue the edges of the cloth fast around the edges of the cocoanut. If the canton flannel was not fastened tight, they would pull and the cotton out of the nest. I tie the cocoanut high

up in the cage, knotting the string out of their reach. For they can untie any knot at which they have a fair chance, and would be sure to want that string to build with. I can hardly keep a whole piece of paper on the cage floor, because they tear it into shreds. They work very hard taking material to the nest. Then the hen sits in the nest as if to try whether it is satisfactory. She scratches, and flutters her wings like a hen taking a dust bath, and finally decides that the lining will not do at all. So they both pull out all they have put in, (and would remove cotton flannel, cotton, and the string that holds the cocoanut, if they could) and with new and old material try lining it again with the same result. They continue industriously lining it and tearing it out and trying it over again, till the hen lays an egg. That ends the nest building. Oddly enough, I never knew a pair to finally leave in the nest a bit of the material they have worked so hard to prepare. The egg is laid on the bare cotton flannel. The mother-bird begins at once sitting on the egg, though she lays an egg each succeeding day till she has from four to six tiny, faintly-speckled treasures of a delicate greenish tint. Two weeks from the day the first egg was laid, it hatches, the others hatching successively in the order in which they were laid. Even a day's difference in age makes quite a difference in size, so that for a long time it is easy to distinguish between older and younger birds.

When the mother bird begins sitting, the father bird begins to feed her. Both the male and female canary are provided with some sort of receptacle into which food may pass when swallowed and then be disgorged. The male bird does not carry bits of food in his beak to his little wife as robins take worms to their young. Instead he seems to swallow it, and then disgorge it into her mouth. When the little birds begin to hatch, their mother disgorges part of what the father feeds her into the mouths of the babies. When the youngest bird is a day or two old, the mother leaves the nest for a few minutes, and begins to feed herself in part. But for two or three weeks the father continues to feed her several times a day.

When the mother begins to eat a little food herself, the

father begins to help her feed the babies. They seem to divide the family, he takes charge of the older ones (known because they are larger) and she the younger children. He never feeds her charges nor she his, so they do not make mistakes and feed one baby too much and another nothing.

Pure hemp seed is excellent food for growing birds, besides they should have mashed potato, the yolk of hard boiled eggs, lettuce, tongue-grass, apple and occasionally pieces of light bread. They should not have much sweet food nor bread containing soda or baking powder. Young birds have no feathers, at first, only tufts of down, here and there. And showing through the transparent skin, one may discern in their crops or craws, bits of green lettuce, and the yellow egg.

While the mother bird is sitting, she leaves the nest for a short time once a day for exercise and a bath. She does not touch any food. She stretches and flutters her wings, and hops about briskly, and, I am sorry to say, usually seems to scold her husband sharply. She flies at him, apparently berating him. He dodges and retreats about the cage crying out as if hurt. But if he flies to the nest and sits on the eggs, she does not disturb him. So the inference is that she is insisting on his keeping those precious eggs warm while she is away.

When the birds are three or four weeks old, they are quite well feathered, and as they do not show signs of leaving the nest, the mother begins to push them out, and punish them a little. Sometimes, when a brood are *very* slow about flying, the parents lose all patience with them, and pull out the the feathers of their luckless offspring to add to the bits of paper and cloth with which they wish to try again to line the nest.

Occasionally, a very patient mother bird will nestle down among her big, stupid children and lay the eggs of the next sitting. But if they should be left in the cage till the next brood begin to hatch, their lives might be in danger. Usually in four or five weeks the brood are out of the nest, and have been taught to peck at bits of food. When they have learned to feed themselves they would better be placed

in a separate cage, which should be hung very close to the parents' cage for a while.

In six weeks, they begin to try to sing, and soon after, may be sold in pairs.

A pair of canaries will rear a brood every six weeks from the middle of February to October. And if properly cared for, they will rarely lose an egg or a nestling. Some people who try to raise birds take the father from the cage as soon as the eggs are laid and then wonder why they have bad luck with the young canaries. I don't wonder at all at it, when I think how very busy the father is kept helping to care for the family. It is not strange that the nestlings die when the poor little mother deprived of his assistance has to try to feed the wee brood and keep them warm too. But there is one queer thing, and that is if a cage is changed from one place to another the mother will leave her eggs, or if there are young birds the father and mother will desert them. I had heard they would do this and that some people would not even take a cage down to clean it while the birds were very young. But I had always taken down my cages to clean them and then put them back, so when I happened to need to move two cages containing young birds, I did not hesitate to do so. Fancy my feelings when those cruel parents would not feed their helpless babies another mouthful! I felt like wringing their yellow necks! They let those helpless little birds cry for food till every one of the nine nestlings starved.

At another time there were five birds that I thought had learned to feed themselves so that it would not matter if they were deserted. So I changed the cage from one room to another. But they could not feed themselves and their parents would not feed them, so all of them starved.

Seven dollars is quite as much as I care to invest in experiments of that kind, so I am careful now not to move cages."

The editor suggests that it would be delightful if some bright eyed boys and girls who live where robins and red birds bring up their families, would watch those birds in their housekeeping, and then would write to the editor of Lend a Hand, the interesting things they learn.

A QUESTION IN ETHICS.

Mrs. A. sold a canary to Mrs. B. who lived several squares away. Ten days afterward the bird escaped and chanced to fly back to Mrs. A's yard. She recognized it, and placing the cage containing another bird just inside an open window, she hoped to lure it into the room and re-capture it. It had flown to a low branch near the window and was singing a duet with its former companion, when a neighbor's boy appeared.

"Let me climb the tree and catch the bird, Mrs. A."
"Very well, come toward it from that side, so if it flies it will go into the room." Climbing up very carefully he caught the bird for it was quite tame. Then he said, "I have caught the bird so it's *mine*, and I'm going to keep it!"

"I'm sure it's the bird I sold to Mrs. B., if you take it to her she'll pay you for catching it."

"If it's hers let her find it," he returned running home in high glee.

The next day Mrs. B. called, asking "Have you heard of my lost canary? It got out yesterday."

"Yesterday afternoon James C. caught one just like yours, near my window," said Mrs. A.

When Mrs. B. indentified the bird beyond a doubt, James surrendered it with very bad grace, and insisted upon a quarter for catching it. Mrs. C. called upon Mrs. A. and upbraided her for tattling about Jamie's finding the canary.

"Why Mrs. C., I should have caught the bird if James had not come, and would have sent word to Mrs. B. to come for it. If *your* singer should get out wouldn't you want it again?"

"Of course I would" replied Mrs. C. tartly. "But *you* need not have *told* Mrs. B. that James *found* the canary."

It was none of *your* business. Let her find out herself who had it. I despise tattling!"

QUESTION: If you know that one person has lost a thing and another has found it, what is your duty in the case? Does it make any difference whether what was lost was a bird, a handkerchief, mittens or marbles?

So far as practicable, let the teacher, closely concealing his own view, draw out from each pupil his candid, private opinion and *rule of practice* on the playground in such cases.

Pity 'tis, 'tis true, that recognizing right and doing right are not always synonymous. The boy who tells you promptly that it is wrong, and why it is injurious to smoke cigarettes, may have some in his pockets that very minute.

DESK-WORK—AN EXERCISE IN ABSTRACT NUMBER WORK.

Subtract something from each number in the columns, so that the remainder will be the same as the Roman Number over the column.

IV	VI	II
(1)	(2)	(3)
12	15	9
8	6	12
11	12	7
13	10	11
9	14	8

COMPLETED WORK.

IV	VI	II
(1)	(2)	(3)
$12 - 8 = 4$	$15 - 9 = 6$	$9 - 7 = 2$
$8 - 4 = 4$	$6 - 0 = 6$	$12 - 10 = 2$
$11 - 7 = 4$	$12 - 6 = 6$	$7 - 5 = 2$
$13 - 9 = 4$	$10 - 4 = 6$	$11 - 9 = 2$
$9 - 5 = 4$	$14 - 8 = 6$	$8 - 6 = 2$

WASHINGTON DAY PROGRAM.

[The decoration of the school-room should be delegated to the pupils. Pictures of George and Martha Washington will be in order. Pictures of incidents in the revolutionary war can, perhaps, be borrowed from the school patrons. Secure as many flags as possible and drape them gracefully over pictures and windows. Let the artists of the school ornament the blackboard. Evergreens can easily be secured at this season of the year. The taste and skill of your committee of pupils will soon transform your school-room into a thing of beauty.]

1. SONG.....America.

Welcome, thou festal morn!
Never be passed in scorn
Thy rising sun,
Thou day forever bright
With Freedom's holy light,
That gave the world the sight
Of Washington.

Unshaken 'mid the storm,
Behold that noble form—
That peerless one—
With his protecting hand,
Like Freedom's angel stand,
The guardian of our land,
Our Washington.

2. RECITATION.....February.

Here comes jolly February,
 Month of storms and month of thaws;
 Month when winter slips her fetters,
 Spite of Ice-King's sternest laws;
 Month when happy birds are mated,
 Month of good St. Valentine.

Shortest month of all, we greet thee!
 Bring us clouds or bring us sun,
 Surely we all bid thee welcome,
 Month that gave us Washington!

—E. C. D. in *Primary Education*.

3. RECITATION.....

A Boston master said one day.
 "Boys, tell me if you can; I pray,
 Why Washington's birthday should shine
 In to-day's history more than mine."

At once such stillness in the hall
 You might have heard a feather fall,
 Exclaims a boy not three feet high,—
 "Because *he* never told a lie!"

—Ex.

4. RECITATION.....Geo. Washington.

"How did George Washington look?" asked Nell.
 "What was he like? Won't you please to tell?"
 Thus I answered: "A courtly man,
 Wearing his honors as heroes can.
 Erect and tall, with his six feet, two;
 Knee-breeches, buckles, frills and queue;
 Powdered brown hair; blue eyes, far apart;
 Strong-limbed and fearless, with gentle heart;
 Gracious in manner toward every one.
 Such, my Nellie, was Washington."

5. RECITATION.....Washington's Christmas Party.

Come, all who love a merry tale
 With joke both true and hearty,
 We'll tell you how George Washington
 Once made a Christmas party.
 Across the Delaware quite plain
 The British flag was vaunted,
 His troops ill-clad, the weather bad
 And yet he was undaunted.
 "Come boys," he said, "we'll go tonight
 Across the raging river;
 The troops will be at Christmas sports

And will suspect it never.
 The Hessians all will keep this night
 With games and feasting hearty,
 We'll spoil their fun with sword and gun,
 And take their Christmas party.

And so they row across the stream
 Though storms and ice pursue them.
 The fishermen from Marblehead
 Knew just how to go through them.
 Upon the farther shore they form
 And then surround the city
 The Hessians all after their ball
 Were sleeping, what a pity.

And when at last at call, to arms!
 They tried to make a stand, sir,
 They soon took fright and grounded arms
 To Washington's small band, sir.
 Across the stream they look that day
 One thousand Hessians hearty,
 Their fun was spoiled, their tempers roiled
 By this famed Christmas party.

—Ada Simpson Sherwood.

WASHINGTON'S YOUTH.....

(This can be recited by different pupils standing at their seats.)

6. George Washington was born at Bridges Creek, Virginia, February 22d, 1732. His early home was a plain wooden farm-house, built after the old Virginia pattern—four rooms on the ground floor, and an attic story with a long sloping.

7. Tradition names him "a fine, vigorous, healthy child." It also declares that the little frock he wore at christening was fashioned in the colors red, white, and blue—the same he chose for the flag of our Union.

8. Augustine Washington and his wife, the parents of George, were worthy, sensible, straightforward people, devoted to the care of their family and estates.

9. When George was three years old, he was taken from Bridges Creek to the Banks of the Rappahannock, where he began to read and write.

10. Soon after his father's death he went to live with his half-brother Augustine, and attended school kept by a Mr. Williams. There he received what would now be called a fair common school education.

11. He matured early, and was a tall, active, muscular boy. He could outwalk, outrun and outride any of his companions, as he could no doubt have thrashed them, too, though he was notably a peaceable, generous, noble-hearted playfellow, without being the goody-goody prig that he is sometimes painted.

12. His mother, a widow with five children, naturally was anxious to place George, the eldest, in some position where he could earn his own living; and it was thought best for him to go to sea, at first on a tobacco ship with the hope that later he might join the crew of a man-of-war, or, perhaps, become captain of a trading vessel.

13. Many plans were made for his sea service, but his mother, who was very unwilling to give up her oldest son, finally decided against it. So he remained at home and studied surveying with his old tutor.

14. That Washington was a diligent student there can be no doubt. His range of reading was limited to the best books of the period.

15. There are still some early papers in existence belonging to his schooldays, chiefly fragments of school exercises which show that he wrote a bold, handsome hand, and that he made geometrical figures and notes of surveys with the neatness and accuracy which clung to him in all his life work.

TRIBUTES TO WASHINGTON.....

16. "The value of Washington transcends that of any other man to any land.
—*Geo. William Curtis.*"

17. "The fame of Washington stands apart from every other in history, shining with a truer luster and a more benignant glory."
—*Washington Irving.*

18. "You need not turn your eyes to ancient Greece, or Rome or to modern Europe. You have in your own Washington a more recent model whom you have only to imitate to become immortal."
—*Wm. Wirt.*

19. "It matters little what immediate spot may be the birthplace of such a man as Washington. No people can claim, no country can appropriate him; the boon of Providence to the human race, his fame is eternity, and his residence, creation."
—*Charles Phillips.*

20. "As a ruler * * he never forgot that the end, and meaning, and aim of all just government was the happiness of the people and he never exercised authority till he had first taken care to put himself clearly in the right. His candor, his patience, his love of justice, were unexampled."
—*William Smythe.*

21. "Modest, disinterested, generous, just, of clean hands and a pure heart, self-denying and self-sacrificing, seeking nothing for himself, declining all remuneration beyond the reimbursement of his outlays, scrupulous to a farthing in keeping his accounts, of spotless integrity, scorning gifts, charitable to the needy, forgiving injuries and injustices, brave, fearless, heroic, with a prudence ever governing his impulses, a wisdom ever guiding his valor, true to his friends, true to his country, true to himself.

"From first to last he never sought an office, military or civil. Every office stood candidate for him, and was enobled by his acceptance of it."
—*Robert C. Winthrop.*

22. "Napoleon the Great announced Washington's death to the army of France, and ordered the standards and flags throughout the country

to be bound with crape for ten days, during which a funeral oration was delivered in the presence of a brilliant assemblage, including Bonapart himself."

23. "In youth, true; in manhood, brave; in age, wise; in memory, immortal."
—*Bishop Simpson.*

24. "It is fitting that the public schools of America unite year by year to do honor to this *First American*. Washington's farewell message to his countrymen was a reminder that a nation governed by public opinion must be, before all, an enlightened nation. So this day, as we wreath our Washington with evergreen and laurel, we understand our duty. To the millions of children like us in the public schools the command of the coming years belongs. As we face the future we promise that Washington's unselfish patriotism shall be our aim and that his loyalty to duty shall be our guide."
—*Francis Bellamy.*

25. ESSAY.....The Washington Monument.

[This essay ought to be intensely interesting, if the origin, the location, an account of the stones sent from all parts of the world for its building, its final completion and dedication are pictured faithfully.]

26. SONG.....Hail Columbia.

Sound, sound the trump of Fame!
Let Washington's great name
Ring through the world with loud applause;
Let every clime to Freedom dear
Listen with a joyful ear.
With equal skill, with god-like power,
He governs in the fearful hour
Of horrid war, or guides with ease,
The happier times of honest peace.
Behold the chief, who now commands,
Once more to serve his country stands—
The rock on which the storm will beat.
But armed in virtue firm and true,
His hopes are fixed on Heaven and you.
When hope was sinking in dismay,
When glooms obscured Columbia's day
His steady mind, from changes free,
Resolved on death or liberty.

27. All standing, in concert repeat:—

"And now three cheers for Washington,
Together we will give;
All hail our hero, Washington,
Long may his memory live!"

—*Sherwood.*

"To our flag, the starry banner, and to our country, which it represents, we pledge our fortunes, our lives, and our sacred honors."

[For additional material for program, see January '94 and February '95 JOURNALS.]

EDITORIAL.

It is not safe to send silver in an ordinary envelope. Send instead, two-cent stamps.

If the author of the sketch by "Uncle Joe" will give his name and address, we will tell him why we cannot print his poem.

WHEN you send pay for the JOURNAL please state when and with whom you subscribed. This will often save writing a second letter.

It will be noticed that the JOURNAL prints in full President Sandison's inaugural address at the State Association. It merits careful study.

SPECIAL attention is called to the comments on Henry VIII, in this issue of the JOURNAL, by Prof. Ridgon. Teachers will certainly appreciate them.

OWING to the large space in this issue of the JOURNAL taken by the State Association minutes, quite a number of articles have been crowded out. They will appear later.

"PLAN YOUR WORK AND WORK YOUR PLAN."—This is an excellent motto. A great deal of the worry of school life and many failures can be traced directly to a lack of "special preparation" for each day's work. When a teacher has his work well in hand and his plans well matured for all his work, he has a power over his school that the poorly prepared teacher knows nothing about.

"REMINDER"—It was the understanding that all time subscriptions to the JOURNAL should be paid by January 1, 1896. Quite a large number of people have forgotten this arrangement. It takes time and money to send a "reminder" to each person and it ought not to be made necessary. Let each one to whom this applies send payment at once, or send a card stating why delay is unavoidable and name a time when money will be sent.

ENGLAND has a new poet laureate in the person of Alfred Austin. The appointment is a surprise to the literary world. Mr. Austin is a newspaper man who has written and published a great deal, (sixty volumes) but nothing of sufficient merit to attract special attention. The literary press seems to think that from Wordsworth and Tennyson to Austin is a great fall. When Austin dies would be a good time for England to dispense with this supernumerary office.

NEW YORK has a new law which requires the teaching of scientific temperance in the schools. Owing to some of its features, many of the teachers are opposed to it. The teachers claim that the state imposes duties upon the teachers, and that when these duties are discharged and the children are taught temperance principles, the state does what it can to nullify this teaching by allowing a saloon in every neighborhood. Under existing laws, Indiana teachers have not the same grounds of complaint.

QUERY.—“Why did you discontinue my JOURNAL? Were you afraid I would not pay for it?”

ANSWER —I discontinue it at the end of the time for which you subscribed—a uniform custom which has been practiced in this office for more than twenty-five years. I am always glad to renew subscriptions, but have never thought it right to thrust the JOURNAL upon a person beyond the time of his subscription, without his consent. This is in accordance with honest square dealing and is in accordance with the wishes of ninety-nine hundredths of our patrons.

THE STATE TEACHERS' ASSOCIATION proceedings occupy a large space in this issue of the JOURNAL, but the reading is not monotonous. The reports of papers are not lengthy but give the main points. The meeting was largely attended and the interest was good. The large number of sections divided the interests in the afternoons to such an extent that many were heard to express a desire that the number of sections might become less, rather than more. J. A. Carnagey, chairman of the executive committee, has reason to congratulate himself on the quality of the program and the manner in which it was carried out. Howard Sandison made an excellent presiding officer and gave universal satisfaction. Miss Helen Sanxay made a superior secretary as her printed reports show.

UTAH is now a state. It was admitted into the Union by the proclamation of the president, January 4. The pen with which the president signed the proclamation was secured and is to become a historic relic. Utah was organized as a territory in 1850, when it had a population of 11,380. Its present population is estimated at 235,000. Its area is 84,970 square miles. Most of its surface is barren except when irrigated, but is rich in minerals. Its constitution forbids polygamy. Utah is the *forty-fifth* state. Its admission was the occasion of great rejoicing at Salt Lake City. Immediately after taking the oath of office, Gov. Wells convened the legislature which elected two senators who have already taken their seats. See January '95 JOURNAL for a full description of Utah.

GIFT OF \$1,000,000.—Miss Helen Culver, of Chicago, has given \$1,000,000 to the University of Chicago, the entire gift to be devoted to the increase and spread of knowledge within the field of biological sources. A portion not to exceed one-half the capital sum thus given, may be used for the purchase of lands, for equipment and for the erection of buildings. The marine laboratory will be erected either on the Atlantic or Pacific coast and the inland laboratory will be placed at Lake Geneva, Wis., where the Yerkes telescope is located; \$300,000 will be spent for the erection and equipment of buildings on the college campus in that city. Miss Culver is about fifty years of age and some years since inherited the estate of her uncle Charles J. Hull, whose housekeeper and accountant she was for many years. Her estate is estimated at anywhere from \$7,000,000 to 10,000,000. She says that in making the gift she is carrying out the ideas and honoring the memory of her uncle, whose name will be borne by all the buildings to be erected.

HO FOR JACKSONVILLE!—How many Indiana superintendents are going to Jacksonville? The department of superintendence of the N. E. A. is to meet at Jacksonville, Fla., on February 18, 19 and 20, 1896. Supt. L. H. Jones, of the Cleveland schools, is president. Among the subjects to be discussed are the following: "What is the True Function or Essence of Supervision?" "What is the Best Use That Can be Made of the Grade Meeting?" "How Shall the Best Schools be Brought to the People in the Rural Districts?" "Some Social Factors in Rural Education in the United States" (Hinsdale); "The Necessity for Five Co-ordinate Groups in a Course of Study" (W. T. Harris); "The Influence of the Kindergarten Spirit Upon the Public Schools" (Inspector Hughes); "What Should the Elementary School Accomplish for the Child?" (Miss N. Cropsey, Arnold Tompkins). Four round-tables are provided for city, state and county superintendents, and child-study. Several free excursions on the St. Johns river and elsewhere are promised. Let Indiana send a good delegation and then capture the Association and bring it to Indiana next year. It can be done.

THE READING CIRCLE BOARD.

The writing of an anonymous letter is always a thing to be ashamed of. The person who writes such letters is usually a coward and takes this method to "stab in the dark," without being willing to take the consequences of his deed.

Just before the meeting of the State Association some one signing himself "Committee" sent out broadcast a letter making a vicious attack upon the Reading Circle Board. It charges that the President works in the interest of one particular Book House because all the books used in the Teachers' Circle in the last two years are published by that House. It also charges that members edit and compile books to be adopted by the board and thus "work" the Circle for personal gain.

The JOURNAL is interested in this matter only to the extent of seeing the Reading Circle Board treated fairly. No member of the Board has been consulted and no communication has been sent to this office. If the Board is guilty as charged, of course no defense can be made for it and none should be attempted. But are the charges true?

While it is true that Ginn & Co. have furnished all the books for the Teacher's Circle for the last two years, it is also true that two of the books, "School Management," last year, "General Methods," this year, were secured by the House after their adoption by the Board. Furthermore, the mere fact that one publishing house has furnished the books selected, lacks a great deal of proving that the Board is corrupt. It is well known that some of the publishing houses will not make special editions and reduce the prices as required by the Board. Neither do the facts that Mrs. McRae edited the plays of Shakespeare used by the teachers, or that Mr. Glasscock, the author of a book selected for the Children's Circle, argue in the least that these persons are "working" the Circle for personal gain. The writer happens to know that Mrs.

McRae at first positively refused to undertake the work and that another person was found who began it. At a late date this person was compelled to give up the work on account of sickness. In this emergency Mrs. McRae, at much personal sacrifice, reluctantly consented at the urgent request of the other members of the Board to undertake the task.

Mr. Glasscock, of course, deserves censure for writing a book so good that the other members of the Board thought it worthy to be placed on the list for the Young Peoples' Reading Circle. The JOURNAL can make no defense for him.

This Board has made the Reading Circle of Indiana a phenomenal success—so much so that Indiana is far in advance of any other state in the Union in this regard.—It has secured books for both teachers and young people at less than wholesale prices, and it has done this at no cost to the teachers of the state. It has made annual reports to the State Association and its books are always open to inspection by any interested person. It devotes much time to its work for which it gets no pay. And yet, it may make mistakes; it may do some things that need explanation, and it may, it *may* do some things from a selfish motive. The Board of course does not expect to conduct its work in such a way as to please all—that would be impossible. It expects criticisms, but it has a right to expect that they be made in a frank, open manner.

The following named persons compose the Reading Circle Board: Emma Mont McRae, President; D. M. Geeting; T. A. Mott; David K. Goss; Adelaide Baylor; Chas. F. Patterson; J. A. Woodburn; W. H. Glasscock; Quitman Jackson; F. A. Cotton, Secretary.

The JOURNAL submits that ten more honorable and more trustworthy persons cannot be selected from the teachers of the state, and that if these persons cannot be trusted, nobody can be trusted and the whole reading circle business should be abolished. The anonymous letter referred to maligns the character of every member of the Board. In charging that the President selects the books of one House for selfish purposes, the charge is indirectly made that the other nine members join in the same scheme, or else that they were all dupes with no minds of their own.

The JOURNAL is compelled to believe that any member of the Reading Circle Board would rather be proved guilty of every offense charged in the circular, than to even be suspected, by a large number of people, of writing the anonymous letter.

TO THE COUNTY SUPERINTENDENT.

My Dear Sir:—The Supreme Court, in the case of Richard A. Edwards et al. vs. State ex rel. Luther Kisling (No. 17391) Dec. 17, 1895, decided that transfers for school purposes must be made *every year*.

In view of this fact the County Superintendents' Association, at its meeting Dec 26, 1895, by resolution, asked this department to prepare a uniform report for transfers and send each superintendent what he

will need for his county. Please to let me know how many you will need,—one for every transfer. The only cost to you will be the transportation. Make your order soon.

There are a few things in the opinion referred to above, of special importance to you as school officers:

1. Transfers must be made annually.
2. The question to be considered is better accomodation.
3. All questions of transfer are subject to an appeal to the Co. Supt., whose decision is final.

Yours very truly,

D. M. GETTING.

IMPORTANT TO SCHOOL TRUSTEES:—The Supreme Court, in a recent decision, reaffirmed its line of decisions in recent years in regard to the ownership of school property located within territory that is taken from one school corporation and added to another. This was in the case of the Indianapolis School Board against the trustee of Center township to quiet the title to three pieces of school property that came within the city limits by annexation. The trustee refused to make a deed to the property and suit was brought. It was claimed by the trustee that as there was a debt owing by the township for a part of the cost of these buildings it should be reimbursed to that extent. When the complaint was filed by the School Board the trustee filed what was called an answer, but what was in reality a cross-complaint, setting up the fact of the indebtedness and asking that judgment be rendered in favor of the board for the title to the property, but in favor of the township for at least a portion of the amount of the indebtedness. On this cross-complaint the Superior Court rendered judgment, after overruling a demurrer to it. The judgment was in accordance with the pleadings of the trustee and required the city to pay \$4,821.48.

The case was reversed by the Supreme Court with instructions to the Superior Court to sustain the demurrer of the plaintiff to the cross-complaint, which gives the title of the property to the city without the payment of any money. The theory of the court is that the property belongs to the state and the title belongs to the corporation in which it is located, while a debt belongs to the corporation contracting it.

EARLHAM COLLEGE is having in various ways the most prosperous year in its history. The attendance of students in the college department is one-fifth larger than it was last year. The present Senior Class numbers forty-three members. Friends of the college are contributing to its financial support as never before, gifts to its Endowment Fund amounting to nearly fifty thousand dollars having been announced within the last twelve months. See advertisement on another page.

QUESTIONS AND ANSWERS.

STATE BOARD QUESTIONS USED IN DECEMBER.

SCIENCE OF EDUCATION.—1. What are the fundamental elements of good moral character?

2. What is the popular view as to the real aims of education?

3. Quote the definition of education given by any leading educational writer.

4. What is meant by the educational value of a subject of instruction?

5. Why should a teacher of English Grammar or Geography, for example, understand the educational value of this subject?

6. On what basis are the branches of study divided into *history*, *natural sciences* and *formal studies*?

7. How is the term *history* used in this classification?

8. What is meant by *formal studies*? (Any five.)

READING.—1. What, in your judgment, should be the test of a pupil's readiness to pass from the fourth to the fifth reader?

2. Some of the defects in the reading of pupils who are promoted to the fifth reader are:

(1) Artificial or unnatural tones of voice.

(2) Indistinct articulation.

(3) Improper modulation.

By what processes would you attempt to eradicate these defects?

3. State how you would endeavor to develop in pupil-readers habits of proper inflection.

4. To what extent and at what stage in the youthful reader's career would you teach correct reading through imitation?

5. When would you have pupils read in concert? For what purpose?

HISTORY.—1. Give an account of the development of the manufacture of two machines that have been strongly affecting our society in the last generation.

2. At how many times has the National Treasury been embarrassed by a surplus? What dispositions have been made each time to remedy this condition?

3. Sketch a map of the United States designating the various accessions of territory since 1800. Mark upon each section the name of the country ceding the territory, if acquired by cession, and the date and the consideration of the cession.

4. Argue the question whether the United States Treasury is a bank. (Any three.)

HENRY VIII.—1. Give a brief history of Catharine.

2. In the sentence.

“My surveyor is false; the o'er great cardinal
Hath showed him gold.”

What is the meaning of *surveyor*?

3. What charge does Buckingham make against Wolsey in the utterance quoted above?

4. When the surveyor gives his testimony against Buckingham, what charge does he make against him?

5. On what occasion was King Henry first brought into social relation with Anne Boleyn?

6. Give the personal history of Anne Boleyn.

7. What qualities of character does Henry reveal on the occasion referred to in question five?

8. After Buckingham's conviction of the charge of treason, what change in his disposition is manifest?

9. Does Shakespeare show us that Buckingham was really guilty, and if he does not, is it a defect in characterization? Give reasons for your answer. *(Any five.)*

GEOGRAPHY.—1. Why should we study astronomical or mathematical geography first?

2. What effect upon the study of geography have the works and labors of Ritter, Humbolt and Guyot had?

3. How does the inclination of the earth's axis affect the seasons?

4. To what extent can and should relief maps be used in teaching geography? Why?

5. Describe the great world ridges or primary high-land.

6. Give an accurate scientific description of mountains.

7. Locate Buffalo, and tell why it must eventually become one of the most important manufacturing cities in the world.

8. What is the most important division of North America? In what does its importance consist?

9. What geographical conditions combine to make Philadelphia so important a shipping port.

10. If you desired to raise cattle in large numbers under the cheapest and most profitable conditions, to what part of the U. S. would you go? Why? *(Any six.)*

GRAMMAR.—1. The whole purpose of a sentence is to express a thought. Show how the above statement relates to grammar and logic.

2. Analyze: It was from me that he received the information.

3. Illustrate the different uses of the present tense, and tell the time expressed by each use.

4. Has the sentence two or three essential elements? Give reasons for your answer.

5. Tell the case of the italicized words in the following sentences:

a. I think that object to be a *man*.

b. It seems to be a *man*.

c. They chose Bonaparte *Emperor*.

d. Bonaparte was chosen *Emperor*.

e. They spoke of his being a *man*.

6. Explain the difference between the appositive noun and the predicate noun. *(Any five.)*

ARITHMETIC.—1. Explain how you would teach fractions to a class in the third year.

2. What busy work is profitable as an aid in teaching numbers? Illustrate fully.

3. The pay of hands in a certain factory was \$2.20 for a day's work of 11 hours; the time was reduced to 8 hours; and the rate of wages per hour 10 cents; what was the daily wages after both reductions?

4. A certain concrete number is composed of five factors; how many of these factors are concrete? Show your reply to be correct.

5. $3\frac{1}{2}$ bushels of apples cost \$2.40, what will $\frac{1}{2}$ of a bushel cost? Indicate, by writing them, the questions you would put to a pupil to ascertain his knowledge of the conditions of the problem before attempting its solution.

6. A merchant buys goods at 10 and 10 off; then sells them at list price, what is his gain per cent?

7. Give four underlying principles of multiplication.

8. A hall is 24 feet long and 12 feet wide, the room adjoining 24 feet square. How much Brussels carpet 27 inches wide will cover both, no allowance for matching? *(Any six.)*

"SCIENTIFIC TEMPERANCE."—1. Is there any stage of life or condition of the human system in which alcohol proves beneficial? What? Why?

2. How is alcohol produced? Does it differ in any degree, as produced from different sources?

3. How can you show that the use of alcohol does not enable the body to resist the influences of severe cold?

4. In those who have been addicted to the use of alcohol, autopsies frequently show abrasions, ulcerations, and other serious derangements of the stomach; what connection with these had the use of the alcohol?

5. Why do physicians at present very sparingly employ alcoholic stimulants?

6. Alcohol applied to the skin rapidly decreases its temperature. Why should its internal use produce inflammation and ulceration?

7. Name the true order in which smoking produces evil effects upon the various functions.

8. Why should the joint use of alcohol and tobacco produce greatly increased evils?

9. What are the effects of opiates and the like narcotics upon the will power? *(Any five.)*

PHYSIOLOGY.—1. What are the physiological properties of a cell?

2. Under what conditions will blood coagulate and what are the advantages and disadvantages of coagulation?

3. What are wandering cells; where do they come from; where are they going and what are they doing?

4. What is the difference between hyaline and fibro cartilage?

5. Describe the liver, name its secretion and state the function of the latter.

6. What relation do nerve fibres have to nerve cells?
7. Describe the different parts of the spinal cord.
8. What is the function of the semi-circular canals?
9. What is the normal temperature of the body and how is the heat of the body maintained? *(Any five.)*

ANSWERS TO PRECEDING QUESTIONS.

SCIENCE OF EDUCATION.—1. Character is a spiritual thing made up of elements which are also spiritual; and each element is a part—like a block of marble in a temple—which has been contributed by a certain virtue. Honesty, truthfulness, purity, sobriety, industry, kindness, modesty, etc., contribute their parts which cemented together by the love one bears for humanity constitute the temple of moral character.

2. To prepare one to "get along well;" "to make a good living;" to show off well in society. To prepare one for intellectual pursuits among scholars and people of culture; to meet the needs of a business life.

3. Education is complete living. (Ruskin.)

4. By the educational value of a subject is meant the measure of its power to contribute to the realization of the chief aim of education.

5. Because he can then best direct his work so as to bring out its value, and economize his time by directness of purpose.

6. On the basis of the trinity, (a) the world of man, (b) the world of matter, (c) and how to conquer them.

7. and 8. (See McMurray, pages 19 and 20.)

GEOGRAPHY.—1. Because the physical features are determined by the forces and phenomena that make up mathematical geography, a scientific treatise would present that subject first; but a class beginning geography should first learn the geographical elements, (see answer to question 1, in geography, page 503 and 504, SCHOOL JOURNAL, Aug. 1895); next, he should learn his locality and his geographical environment.

2. *Karl Ritter*, through his works, became known as the founder of comparative geography.

Humboldt spent four years in exploring the northern part of South America and one year in exploring Mexico. He then spent nearly twenty years in digesting and publishing the results of these labors. Emperor Nicholas of Russia, in 1829, sent Humboldt and two others to explore Asiatic Russia, which was done and the results published; and after he was seventy-four years old he began to write and publish his "Cosmos," which took fourteen years.

Guyot in physical geography was pre-eminent. He came to the United States in 1848 and through a course of lectures on "The Earth and Man" gave the public the benefit of his ripe scholarship. One of his special lines was *Glaciers*, in which he had spent several years of study and had made important discoveries.

3. Alone, it would not affect it at all; but in connection with the rev-

olution of the earth around the sun, the inclination of the axis causes the "seasons".

4. They can be used to an advantage in illustrating relief forms. By them, mountains, valleys, and water-courses, and their relations to each other are clearly seen. The greatest benefit that could occur from their use would be the *making* of them by the pupils from clay, sand, etc.

5. The great world ridge is the long chain of highlands "somewhat in the shape of a horse-shoe," that can be traced through the great bodies of land beginning at the southern point of South America, following the Andes and Rocky mountains, crossing Bering Strait, and passing on in a rather irregular course through Asia and thence to the southern point of Africa.

6. Mountains are ridges formed by upheavals caused by pressure. The solid cooled surface of the earth in trying to fit itself over the molten interior formed wrinkles or ridges of various heights and forms, the strata being folded or tilted in different ways. These elevations have been modified in form by wind, water, frost and earthquake.

7. Buffalo is a port of entry and has lake and railway facilities. It is an important center of trade, being located at the foot of the great chain of lakes, and being the terminus of the Erie Canal and several important railway lines. It has extensive manufactories and its facilities for handling and storing grain are unexcelled. It will also reap all the advantages to be derived from the utilization of the water power of Niagara Falls.

8. The United States. Its importance consists in its abundant and varied resources, its climate, the energy and intelligence of its people and its form of government.

9. Its safety, convenience, and great accommodations as a seaport have made it a great railroad center. Its unexcelled shipping facilities have made it a great manufacturing city. It is also the center of a great lumber trade, and a special advantage is its nearness to the immense mineral regions of Pennsylvania.

10. To the southwestern part on account of the favorable climate and the cheapness and abundance of pasturage.

SCIENTIFIC TEMPERANCE—1. Some physicans use it to "stimulate" the system in a low stage until it has passed a critical point, claiming that life is thus preserved until the system itself can come to the rescue and rally its own vitality. Others claim that real stimulation can result only from nutritious food, and that when the system is in a low stage, far better results are obtained from the use of properly prepared liquid food than from any kind of alcoholic beverage.

2. Alcohol is produced by the fermentation of sugar when dissolved and brought into contact with a ferment. The fermentation is brought about by the concurrence of five agents (each acting in a different direction), the union of which is indispensable: sugar, water, heat, a ferment, and air. The alcohol from one source differs from that in another in the proportion of the elements which compose it.

From woody fibre the alcohol has the formula CH_4O , and is called *methylic*. From wine, spirits, beer, etc., the alcohol has the formula $\text{C}_2\text{H}_6\text{O}$, and is called *ethylic*. From the potato the alcohol has the formula $\text{C}_5\text{H}_{12}\text{O}$, and is called *amylic*. Their vapors differ in weight and their specific gravities and boiling points are different.

3. Alcoholics are depressants, and whatever tends to lower the vital activity of the system will depress its heat-generating power. Hence to be able to resist the influence of cold, alcohol should be avoided. Oft repeated experiments have proved that alcohol enormously depresses the combustion of the carbon of the system. Its effect is that of closing the damper of a stove, thereby preventing the generation of heat.

4. The action of alcohol on the lining of the stomach is irritating and severely injurious, the results being dyspepsia, congestion, inflammation, and ulceration. Sometimes the ulcerous patches bleed. Besides, the alcohol "picks up" the water from all the textures that it touches.

5. Scientific research has revealed the truths that its effects are injurious, and that it is extremely doubtful whether there could be any virtuous effect that would result from its use.

5. The lining of the stomach is much more tender than the external skin, which is tough from contact with many objects and from exposure in the world of air, into which, alcohol placed on the skin would evaporate; but the lining of the stomach is thin, and very delicate from the nature of its position and environment and it lies in folds. A liquid in the stomach has no chance to evaporate on account of the smallness of the cavity; it does have a chance of being absorbed on account of the spongy structure of the lining; this induces an increased flow of blood to the part, and when this unnatural action has been brought about a few times, these minute blood-vessels become permanently increased in size and distended with blood.

7. First, the functions of the nerves are disturbed. Second, the functions of the circulatory organs and of the lungs. Third, the functions of the organs of digestion and absorption. As to the mind: (1) a loss of memory; (2) the power of attention is impaired; (3) indecision and indisposition to effort.

8. Both smoking and chewing create thirst, and tempt men to drink something to allay it. The condition of the mouth and throat, after having been exposed to the stimulants of tobacco, is such that the user craves a drink that excites or re-stimulates the parts. The consequent relaxation and general depression of the system is counteracted by smoking again, and this shortly demands more drink, and, so on.

9. Their first effect is to suspend or to prevent the reports which the nerves ought to bring to the brain. Next, the user is conscious of a dreamy unnatural condition which is full of pleasant fancies. But a reaction comes on of pain, dizziness, and melancholy, and this condition is relieved by another dose, and so on until the user becomes a slave.

PHYSIOLOGY.—1. Excretion, secretion, absorption, selection, assimilation, reproduction, etc.

2. Coagulation is brought about by the blood coming in contact with "not-living-matter." It is favored by exposure to the air, by motion, and by the presence of obstacles and rough object. It is one of Nature's methods of stopping hemorrhage.

3. Wandering cells are a class of leucocytes. They arise from the lymphatic glands and other adenoid tissue and their destination is the tissues in all parts of the body.

4. *Hyaline* cartilage is composed of cells imbedded in a matrix having a dim granular appearance like that of ground glass, and in man and the higher animals has no apparent structure. *Fibro* cartilage is composed of cells imbedded in a matrix made up almost entirely of fibres closely resembling those of white fibrous tissue.

5. For description see any good text-book.

6. Nerve fibres originate or end in nerve cells. A protoplasmic thread is continuous from the sense-organ cell through the core of the nerve fibre to the nerve-cell of the nerve centre, and back to the muscle cell.

7. See p. 222, text-book, or any good treatise on the subject.

8. They (a) collect in their fluid contents sonorous undulations from the bones of the cranium; and (b) aid in the sense of equilibrium, or co-ordinate muscular movement.

9. The normal temperature of the body is about 98 degrees. The heat of the blood is maintained by the process of combustion. The foods we eat are burned.

ARITHMETIC.—1. By the use of objects,—apples, oranges,—and by the use of circles, drawn on the board and divided up as *pies* are, and if they are so called, the interest is enlivened. First, give the idea, then the word or words, and lastly, the symbol.

2. (a) Stringing colored beads, (b) putting grains of corn into groups, (c) tying sticks into bundles, etc., each exercise according to some definite direction.

3. Answer, 80 cents.

4. Only one of them is concrete and it must be taken as the multiplicand and all the others must be considered as multipliers.

Thus, $93600 \text{ mills} = 5 \text{ mills} \times 60 \times 10 \times 26 \times 12$, in which the sign \times is read *multiplied by*. This answer is based upon the principles that the multiplicand and the product are like numbers, and that the multiplier must always be regarded as an abstract number.

5. (a) How many halves in $3\frac{1}{2}$? (b) $\frac{1}{2}$ is what part of $\frac{1}{2}$? (c) If $\frac{1}{4}$ cost \$2.40, what then will $\frac{1}{2}$ cost? what will one bushel cost? $\frac{1}{2}$ of a bushel? $\frac{1}{4}$ of a bushel. (The answer is \$.15 $\frac{1}{4}$).

6. $100 - \frac{1}{10}$ of $100 = 90$; $90 - \frac{1}{10}$ of $90 = 81$; $100 - 81 = 19$; $19 + 81 = 23\frac{1}{10}$; hence, the gain is $23\frac{1}{10}\%$ per cent.

7. (a) The multiplier must always be regarded as an abstract number. (b) The multiplicand and product are like numbers, and may be either concrete or abstract. (c) The product is not affected by

changing the order of the factors. (d) The product divided by either of its two factors will give the other factor.

8. The strips are $2\frac{1}{4}$ feet wide; $24 \div 2\frac{1}{4} = 10\frac{2}{3}$, the number of strips required for the square room; $12 \div 2\frac{1}{4} = 5\frac{1}{3}$, the number of strips required for the smaller room; $10\frac{2}{3} + 5\frac{1}{3} = 16$, the number of strips required for both; 16 strips @ 8 yards = 128 yards, the amount required to carpet both rooms.

READING.—1. He should be able to interpret readily the selections that are usually found in fourth readers, and should be able to express the language orally in a creditable manner.

2. The first and the third evils may be remedied by systematic drills upon proper exercises, and by leading the pupil to master thoroughly the thought before he gives the oral expression, and to be as natural and as conversational as possible. The second may be remedied by drills upon proper exercises.

3. See first part of answer (2). *Vocal inflection* is merely a sub-topic under *modulation*.

4. Imitation is not a method of teaching reading, but it serves as an auxiliary, at any stage, as follows: Many pupils do not understand all the varieties of tone necessary to express properly some of the ideas found in the reading, because they have never experienced them, at least in certain degrees. In such cases it is very helpful for the teacher to express the passage properly.

5. As a variation from the regular work it is interesting. It has a value in the enforced effort each pupil must give in attending to his own progress properly. The larger the number of pupils the more difficult it is to derive any great benefit from this exercise.

GRAMMAR.—1. It relates to logic because that science deals with formal thought, and the form of the sentence depends upon the nature of the thought. It relates to grammar because that science treats of the structure of the sentence, and the nature and relations of its parts.

2. This is a complex sentence, having a subordinate clause used as a predicate attribute. "It" is the subject, the remainder is the predicate, of which "was" is the copula, and the clause the complement. The clause is *that he received the information from me*, of which *that* is an introductory conjunction (so-called); *he* is the subject; *received* is the predicate, modified by *from me* and by *information*. Or, consider "It" an expletive; then, the clause *that he received the information from me* is the subject, and *was* the predicate. This disposition assists in making the thought clear.

3. The present tense is used to express— (a) what is present; as, "John sees the horse;" (b) an implied future; as, "When he prepares his lesson, I will hear him;" (c) general truths; as, "Winter comes and goes;" (d) habitual action; "The train leaves at two o'clock;" (e) what has occurred in the past; "The general dashes along the line and cheers his men." This is called the *historical present*, and is used to take the place of the regular past, when the author wishes to make

the scene as vivid and life-like as if it were occurring at the present time.

4. The sentence has two essential elements; for it has never been clearly shown that any word can assert without expressing something of the idea asserted.

5. (a) "man" is in the objective case, to agree in case with "object;" (b) "man" is in the nominative case, to agree with "It;" (c) "Emperor" is in the objective case, to agree with "Bonaparte;" (d) "Emperor" is in the nominative case, to agree with "Bonaparte;" (e) "man" is in the independent predicate nominative, after the participle "being."

6. The predicate noun denotes an *asserted* attribute of the subject, and is added to name a class to which the subject belongs; The appositive denotes an *assumed* attribute of the word to which it belongs, and is added by way of explanation or emphasis.

HISTORY.—1. The development of the reaper has been such as to make it do more and more of the work, thereby at each step in its improvement requiring fewer men in harvesting the grain. During this time the number of men desiring work constantly increased. Hence, one effect of the evolution of this machine has been to increase the number of idle men, and such an effect is harmful to society. But there is another side to this question. The reaper made possible the sowing of grain fields many times larger than had ever before been contemplated. (See note in text-book, p. 270 and 271). The locomotive in its influence on travel and commerce has established intimate relations among the different sections of our country, thereby creating ties of interest calculated to insure peace, prosperity and friendship.

2. In Jackson's administration and in Benjamin Harrison's. In the first instance (1837) the surplus, \$28,000,000, was loaned to the states, and was never called in. In the second instance (1890) the surplus, \$400,000,000, was disbursed by the purchase of bonds not yet due, and by increased appropriations by congress.

3. The U. S. Treasury is like a bank in that (a) it receives and disburses money; (b) it gives one kind of money in exchange for another; (c) it borrows money; (d) it is a place of safe deposit. The U. S. Treasury is unlike a bank in that (a) it sells no exchange; (b) it discounts no paper; (c) issues no letters of credit; (d) it does not receive deposits from the public.

HENRY VIII.—

1. Catherine, the daughter of Ferdinand and Isabella of Spain, was born the 15th of December, 1485. She was married to Arthur, the oldest son of Henry VII of England, in November, 1501. Arthur died in April 1502. Through the influence of Ferdinand but against the wishes of Catherine, the ceremony of betrothal, engaging her, then eighteen, to Henry VIII, the second son of Henry VII, was performed in 1503. Their marriage did not take place till 1509. Through the early years of their marriage they were happy, but the death of all their children

except Mary, a sickly child, cast a permanent gloom over the life of Catherine, which deepened with the years.

In 1527, Henry's scruples as to the validity of his marriage were made public. Divorce proceedings begun at this time were not brought to a close till 1533, when Cranmer, the archbishop declared the marriage null and void. Catherine soon lost her health, and died at Kimbolton Castle, the 7th of January, 1536.

2. *Surveyor* here means *overseer*.

3. In "The o'er great cardinal hath showed him gold," Buckingham charges Wolsey with being *o'er great*, that is, unduly ambitious; but his chief accusation is that Wolsey has bribed his (B's) surveyor.

4. In his testimony the surveyor charges Buckingham with having said very frequently, "That if the king should without issue die, he'd carry it so to make the scepter his;" and "That, had the king in his last sickness fail'd, the Cardinal's and Sir Thomas Lovell's heads should have gone off." He further charges Buckingham with having said that if he had been sent to the Tower and could have gained an entrance to the king's presence, he would have killed the king.

5. According to the play, but not according to history, King Henry was first brought into social relation with Anne Boleyn at the grand ball and festival given by Wolsey.

Anne Boleyn was the daughter of Thomas Boleyn, a distinguished politician. She was born between 1501 and 1507, but the exact date of her birth is not certainly known. She received a careful education, and in 1514 became maid-in-waiting to Mary Tudor, then the affianced bride of Louis XII of France. She afterwards entered the service of Queen Claude and was celebrated for her beauty, talents and accomplishments. She returned to England near 1522. About this time she became maid of honor to Catherine and was engaged in a love affair with Percy, which has become historic. It was broken off by Wolsey, who was doubtless directed by the jealous Henry VIII. It is said that at first she angrily rejected Henry's offer of love. I recall nothing from Shakespeare that reflects discredit upon her character, but the following dates from history are greatly against her. About 1530, she was accustomed to keep state almost as queen. In 1532, she was made marchioness of Pembroke, and accompanied Henry on his visit to France. January 25, 1533, she was secretly married to Henry. On the 12th of April, she was openly proclaimed queen. On the 8th of May, Henry's marriage with Catherine was declared null and void. On the 7th of November, there was born to Anne Boleyn and Henry VIII a princess, the famous Elizabeth.

Not much is known of Anne's married life. Within less than three years, Henry's passion had found a new object in Lady Jane Seymour. The end is easily conjectured. On the pretext of infidelity, Henry had Anne tried, convicted, sent to the Tower, and finally on the 19th of May, in spite of her protestation of innocence, she was executed.

Henry went into mourning and did not marry again for nearly twenty-four hours.

7. Here Henry shows himself to be a lover of entertainment, passionately fond of both women and wine, and altogether disregarding of family ties.

8. After Buckingham's conviction, a marked change comes over him. His haughtiness changes to humility, his unrelentless hatred of his enemies becomes perfect forgiveness, his ambition for outward promotion gives way to inner peace.

9. I think that Shakespeare does not show us that Buckingham was guilty. There is no law of art requiring a dramatic author to show that every tragic character reaps the results of his own misdeeds. Art must never be quite so scholastic. It need only be true to life; and in actual life there is many a tragic end that must be referred to a higher power for its explanation.

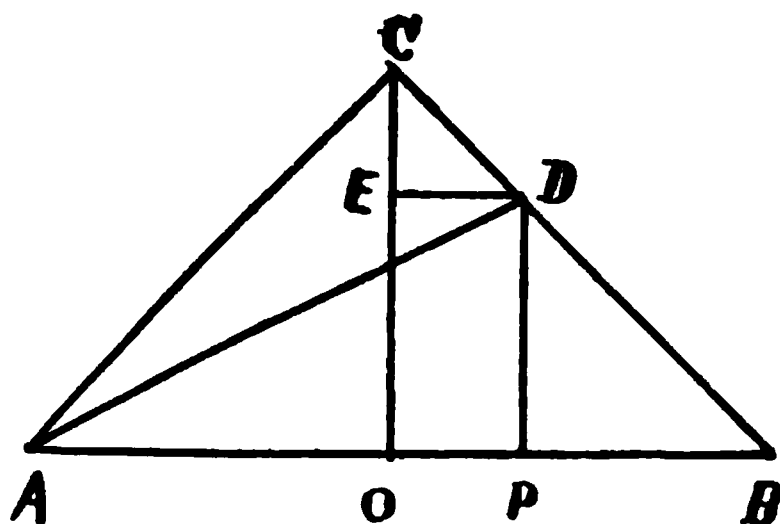
J. R.

FOOD FOR THOUGHT.

[Send all communications to W. F. L. Sanders, Connersville, Ind. They should be received by Feb. 18. Be prompt. Write only on one side of your paper.]

SOLUTIONS RECEIVED.

PROBLEM 106. A line AB is divided equally at O and unequally at P; to prove that..... $AP^2 + BP^2 = 2AO^2 + 2PO^2$.



SOLUTION.—At O erect the perpendicular OC, and make it equal to OA or OB, and join AC and BC; also, erect a perpendicular PD, and draw DE parallel to AB and join A and D. The triangle ACB is right-angled at C, and $AC = BC$; also, $PD = PB$, and $EC = ED = OP$. Then

$$AP^2 + BP^2 = AP^2 + PD^2 = AD^2 = AC^2 + CD^2;$$

$$\text{But, } AC^2 = 2AO^2, \text{ and } CD^2 = 2ED^2 = 2PO^2;$$

$$\text{Therefore, } AP^2 + BP^2 = 2AO^2 + 2PO^2 \dots \text{Q. E. D.}$$

[By J. C. GREGG, A. M., Brazil, Ind.]

SOLUTION OF 106.—

$$AP = AO + OP; BP = AO - OP$$

$$AP^2 = AO^2 + 2AO.OP + OP^2$$

$$BP^2 = AO^2 - 2AO.OP + OP^2$$

$$\text{Adding, } AP^2 + BP^2 = 2AO^2 + 2OP^2.$$

[By OTTO CLAYTON, Fowler, Ind.]

PROBLEM 109. I wish to purchase a 5% bond so as to make the investment yield me 7%; how much can I pay for the bond, including brokerage at $\frac{1}{2}\%$? [Ind. Comp. Arith., page 283, ex. 36.]

SOLUTION.—Since the bond in the first instance yields 5%, and 7% in the second, it would have to be purchased at $\frac{5}{7}$ of its par value. $\frac{5}{7}$ of 100 = $71\frac{1}{7}$, the price including brokerage; $71\frac{1}{7} - \frac{1}{2} = 70\frac{1}{2}$, the price excluding brokerage, the price of the bond alone.

(By J. A. AUBRY, Headlee, Ind.)

[The requirement of the question should be interpreted—How much can I pay for the bond alone, if I pay brokerage at $\frac{1}{2}\%$? The actual wording of the requirement is not clearly consistent with the answer.—EDITOR.]

PROBLEM 110. A clock set right at noon indicates 3 minutes past 6 at 6 o'clock; at what time does it indicate 6 o'clock?

SOLUTION.—6 hrs. 3 min. = $6\frac{1}{20}$ hrs.; we have the proportion:

$$6\frac{1}{20} \text{ hrs.} : 6 \text{ hrs.} :: 3 \text{ min.} : x = 2\frac{1}{4} \text{ min.}$$

The correct time is $2\frac{1}{4}$ min. before 6, or $57\frac{1}{4}$ min. after 5.

(By N. H. THOMPSON, Convenience.)

PROBLEM 111. Given the hypotenuse and one leg of a right-angled triangled equal to 353 and 272, to find the remaining leg without squaring the given numbers

SOLUTION.—

Let $H = 353$; $P = 272$ and B base;

Then $H^2 - P^2 = B^2$; or, $B^2 = (H + P)(H - P)$;

$H + P = 625$; $H - P = 81$; $625 \times 81 = 50,625$;

$B^2 = 50,625$; $B = 225$, answer.

(By C. A. ROBERTSON, English, Ind.)

PROBLEM 98. A and B purchase a quantity of cloth for \$39.57; A pays 15 cents per yard for his. The price B pays per yard equals $\frac{1}{7}$ of the whole number of yards purchased. How many yards did each buy, and what price did B pay? (M. M. ZINKAN, Washington, Ind.)

SOLUTION.—Let x = number of yards A buys at 15 cents; and y = the price B pays per yard; then $7y$ = whole number of yards bought, and from the conditions,

$$15x + y(7y - x) = 3957; \text{ or } x(15 - y) = 3957 - 7y^2;$$

As we have one equation, and two unknown quantities, there may be many values of x and y , which will satisfy this equation. If $y = 15$, $x = \text{infinity}$; if y is less than 15, then x is greater than $7y$, which is contrary to the conditions. If y is greater than 15, the first member of the equation is negative, and $3957 - 7y^2$ must be negative, that is $7y^2$ is greater than 3957, or y is greater than 23.776, and we must write the equation:

$$x(y - 15) = 7y^2 - 3957$$

Here, $x = \frac{7y^2 - 3957}{y - 15}$; as $7y$ is greater than x ; we have $7y$ greater than

$\frac{7y^2 - 3957}{y - 15}$; solving, we get y less than $37\frac{1}{2}$. Hence, any value of y

greater than 23.776, and less than $37\frac{1}{4}$ will satisfy our first equation.

For example: If $y = 30$, we get $x = 156\frac{1}{4}$; and $7y - x = 53\frac{1}{4}$.

156 $\frac{1}{4}$ yds. @ 15 cts. — \$23.43

53 $\frac{1}{4}$ yds. @ 30 cts. — \$16.14

\$39.57

(By J. C. GREGG, A. M., Brazil, Ind.)

Another solution to this problem will appear in March Number. Also, two more solutions to 106.

SOLUTIONS REQUESTED.

(From the Indiana Complete Arithmetic.)

PAGE 284, PROBLEM 47. One for $\frac{1}{4}$ c. and one for $\frac{1}{3}$ c. — two for $\frac{1}{6}$ c., or one for $\frac{1}{12}$ c. (average purchase price); 5 for 2c. is at the rate of one for $\frac{1}{4}$ c. (average selling price); $\frac{1}{12}$ c. — $\frac{1}{4}$ c. = $\frac{1}{60}$ c., loss on each apple sold; to lose 1c., he must sell as many as the number of times $\frac{1}{60}$ is contained in 1, or 60 times; hence, he purchased and sold 60 apples.

Problem 48. $\frac{1}{2}$ — part A, B and C do in one day

$\frac{1}{3}$ — " B, C and D " "

$\frac{1}{4}$ — " C, D and A " "

$\frac{1}{5}$ — " D, A and B " "

Hence, $\frac{2}{5}$ — part 3A, 3B, 3C, 3D do in one day

Or, $\frac{1}{5}$ — part A, B, C and D do in one day

From this, subtracting separately $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$ and $\frac{1}{5}$, we have respectively, $\frac{1}{10}$, $\frac{1}{15}$, $\frac{1}{20}$, $\frac{1}{25}$, the parts D, A, B and C do in one day. The money may be divided proportionately to what each one does in one day, as they all work the same time. Adding, we get $\frac{1}{5}$; hence, the shares will be $\frac{1}{5}$, $\frac{1}{15}$, $\frac{1}{20}$, $\frac{1}{25}$ respectively, of \$152, or \$56, \$24, \$32 and \$40.

PROBLEM 49. The minute hand must gain 20 min., which will be $\frac{1}{3}$ of the whole distance passed over. If $\frac{1}{3} = 20$, $\frac{1}{12} = \frac{20}{12}$, and $\frac{1}{2} = \frac{40}{12} = 21\frac{2}{3}$, hence, the time will be $21\frac{2}{3}$ min. past 4 o'clock, or 21 min. 49 $\frac{1}{3}$ sec. past 4.

PROBLEM 50. $\frac{1}{8}$ = part A does in one hour

$\frac{1}{12}$ = " B " " " "

$\frac{1}{14}$ = " C " " " "

Adding, $\frac{29}{168}$ = " A, B and C do in one hour.

$1 \div \frac{29}{168} = \frac{168}{29}$ (hrs.) time it takes all to do it.

$\frac{168}{29}$ times $\frac{1}{8}$ = $\frac{21}{29}$ = part A does

$\frac{168}{29}$ times $\frac{1}{12}$ = $\frac{14}{29}$ = " B "

$\frac{168}{29}$ times $\frac{1}{14}$ = $\frac{12}{29}$ = " C "

$\frac{21}{29}$ of \$29.50 = \$7.00, A's share.

$\frac{14}{29}$ of \$29.50 = \$12.00, B's share.

$\frac{12}{29}$ of \$29.50 = \$10.50, C's share.

PAGE 243, PROBLEM 11. \$1 draft costs \$1.01 $\frac{1}{2}$, less bank discount of \$1, at 7%, for 73 d.; this bank discount = \$.014 $\frac{7}{8}$; \$1.01 $\frac{1}{2}$ — \$.014 $\frac{7}{8}$ =

\$1 000 $\frac{1}{4}$; \$10,000 draft will cost 10,000 times \$1 000 $\frac{1}{4}$, which is \$10,008 $\frac{1}{4}$, the exact answer.

PAGE 251, PROBLEM 6. The focal date is April 1.

Feb. 6 + 3 mo. = May 6;	850 × 35 = 29750
Mar. 16 + 30 d. = Apr. 15;	470 × 14 = 6580
Apr. 10 + 4 mo. = Aug. 10;	640 × 131 = 83840
May 15 + 90 d. = Aug. 13;	720 × 134 = 96480
June 20 + 60 d. = Aug. 19;	950 × 140 = 133000
	<hr/>
	3630 349650
Apr. 1; 800 × 0 = 0	
May 12; 600 × 41 = 24600	
May 28 + 60 d. = July 27; 350 × 117 = 40950	
June 23; 540 × 83 = 44820	
Aug. 5; 600 × 126 = 75600	
	<hr/>
	2890 185970
3630 — 2890 = 740; 349650 — 185970 = 163680;	
163680 ÷ 740 = 221+, 221 d. after Apr. 1 = Nov. 8	

CREDITS.—109, Ben Herbert, Eureka; J. M. Farber, Brushy Prairie; F. L. McCafferty, Glen Dale; James M. Silvers, Mt. Pleasant; M. G. Finch, Portland; Elizabeth Hart, Huntington; Yonnie Moss, Ashboro
111, C. A. Robertson, English; Walter N. Vanscoyoc.....106, Joshua Hayes, Springport; Loren M. Edwards, Liberty.....103, [No name], Teegarden.....109, 110, Alton Blunk, Crown Center; N.H. Thompson, Convenience; D. W. Fleming, Middle Fork; Howard Sharp, Andrews . . . 108, 109, 110, I. S. Morse, Crumstown; Will Young, Washington . . . 108, 109, R. C. Dykins, Lexington..... 106, 108, 109, 110, Geo. Ostheimer, Connersville.....106, 107, Otto Clayton, Fowler . . . 95, 98, 108, 109, John Morrow, Charlestown109, 110, 111, P. J. Laswell, Versailles.....107, 109, 110, J. A. Aubry, Headlee..... 107, Grant Williams, Harrisburg107, 109, Everett Beadles, Velpen104, Russell Caldwell, Lynnville 107, 108, 109, 110, M. M. Zinkan, Washington.....106, 108, 109, 110, 111, J. C. Gregg, Brazil 106, 107, 108, 109, 110, 111,, Ed. Wade, Montgomery..... 103, William Hedrick, Ford.

QUERIES.

22. Why has the rebel flag only three stripes?

[A. E. McFATRIDGE.]

23. What is the color of the union in the rebel flag?

[Id.]

24. Where in Shakespeare's writings can this quotation be found:

"Whip me such honest knaves."

[E. M. INMAN, Priam.]

25. In our Indiana History, page 193, section 201 says: "To pay back to France and to other countries what we had borrowed of them during the revolution." From what countries besides France did we borrow money?

[Id.]

ANSWER—Spain and Holland. The debt of the United States Jan.

1, 1891, was as follows: To France, \$7,561,447.42; to Holland, \$5,001,000; to Spain, \$250,382.50

26. What is the matter with the answer to problem 43, page 283, of the Indiana Complete Arithmetic? [JNO. E. PAGE, Heltonville.]

ANSWER.—In the new edition the answer 42 is correct for the requirement in the problem has been changed to, 'How many acres in the tract of land?' In the old edition this answer was incorrect for the requirement there was, 'How many acres had he at first?' The answer there should have been $32\frac{2}{3}$. It was quite shrewd in the reviser to change the requirement instead of the answer, but the problem was weakened by so doing.

27. What was the Crittenden Compromise?

[SUBSCRIBER, Princeton.]

ANSWER.—A resolution offered in 1860, in Congress, by John J. Crittenden, of Ky., that the constitution be amended as follows: In all territory north of $36^{\circ}30'$ slavery was to be prohibited; in all territory south of that line it was to be protected. New states in either section were to determine for themselves. Congress was to have no power to abolish slavery in the District of Columbia so long as it existed in either Virginia or Maryland, nor without the consent of the inhabitants and compensation to non-assenting owners. There were a few other minor provisions.

28. What was the Essex Junto Plot?

[ID.]

ANSWER.—In 1781, John Hancock applied the name Essex Junto to a number of public men from Essex county, Massachusetts, and their followers, all of whom labored very earnestly for a strong federal government and the adoption of the Constitution. Afterwards becoming adherents of Hamilton, they incurred the displeasure of John Adams and formed an intrigue or plot to defeat his election to the presidency. Cabot, Goodhue, Pickering, Ames, etc., were concerned in it. They were denounced by Adams, and many bitter things were said by both sides. Adams called them the "British faction." [See Schuler's History of the United States, Vol. 1, page 468—473 inclusive.]

29. Why has Rhode Island two capitols?

ANSWER.—Because the members of the General Assembly deem it quite an advantage to enjoy the benefits and the pleasures of both cities; and each city makes a special effort to retain whatever hold it has as a meeting-place for them. The Assembly begins its session in May, at Newport, and after a short term adjourns to meet in the January following at Providence for the main session. Both places have their special advantages; Newport is by the sea, is a great summer resort, and has noted social attractions; Providence has the State Library, five legislative halls, Stuart's portrait of Washington, many portraits of local notables, the Colonial Charter of 1663, etc. It is probable that in time Providence will get the entire session.

Several queries stand over to be answered in the April No.

PROBLEMS.

112. I have a triangular piece of silk worth \$1.20; the sides are 3 feet, 4 feet, and $4\frac{1}{2}$ feet; what is the value of the largest circular piece that can be cut from it? [A. E. McFATRIDGE, Holton, Ind].

113. How far from the end of a stick of timber 30 feet long must a handspike be placed so that three men,—two at the handspike and one at the other end of the stick,—may each carry one-third of the load? [J. M. FARBER, Brushy Prairie].

114. Prove that the angle formed by the bisector and the perpendicular drawn from the same angle of any triangle is one-half the difference between the other two angles. [DANIEL HAYDEN, Morocco.

115. By selling \$1000 of 3 per cents. at 95 and reinvesting it, I increase my income \$10 a year. If the dividend on the new shares is 8 per cent., what is the price of them?

116. A train increases its average rate of speed throughout one mile 10 per cent. every minute; in 4 minutes it travels 1547 yards: how far did it travel in each of the four minutes?

MISCELLANY.

INDIANA UNIVERSITY.

On January 20, the 75th anniversary of the founding of the University was duly celebrated. Short speeches were made by Miss Caroline Gerrish, from the students; Prof. W. P. Rogers, from the faculty; Judge R. W. Myers, from the alumni; State Superintendent Geeting and Superintendent D. K. Goss from the State Board of Education; and the Honorable C. W. Fairbanks from the State at large. The speeches were to the point and were highly appreciated by perhaps the largest audience ever assembled in the college chapel. The ladies Glee Club, the I. U. Glee Club and the I. U. Band furnished the music for the occasion. A number of prominent Alumni were in attendance.

Dr. Gustaf Karsten, Professor of German has been appointed Professional Lecturer in the University of Chicago. He will have leave of absence from I. U. during the spring term.

The attendance for the winter term is very gratifying. More than thirty new students have entered.

Frank Duncan, I. U. '94, has taken charge of ward school in Greensburg. He was high school principal at Columbia City last year.

THE Elkhart Institute will dedicate its new building Feb. 14.

BEAR in mind that the National Association will meet this year at Buffalo, July 3—11.

THE Lonsbury Institute of Chicago, claims to be able to teach dumb children to talk provided they can hear.

THE Tri-state Normal at Angola, is making special provision for the teachers who wish to begin Latin in the spring term.

THE Indianapolis high school graduated fifty-six members Jan. 31. The Manual training School graduated thirty at the same time.

HANCOCK CO.—County Sup't Jackson's circular of "information and suggestion" is what it purports to be. The suggestions suggest.

FORTVILLE reports large attendance and an excellent school spirit. The Sup't J. W. Jay has provided a "round table" which he keeps well supplied with papers, magazines and books.

"THE *Indiana Student*" in its January issue gives sketches of the lives of four learned men, ex-professors of Indiana University: viz: Daniel Kirkwood, Elisha Ballentine, Richard Owen, T. A. Wiley.

THE *School Visitor* is the name of a little paper published in the interest of the Mooresville schools by the principal, G. B. Coffman. This method of informing the people as to what the schools are doing is certainly a good one.

THE Calendar for 1896, by the American Book Co., is of special value to teachers. It gives among other things: the area and population of each state, with date of admission; the names of all state superintendents; educational statistics in regard to schools, institutions, chronological tables, etc. Sent *free*, by the publisher, to any teacher.

THE Report of the Committee on course of study for the city and town schools of Indiana, is issued. Let it be carefully studied and tested. No one has a right to criticise it on theory, let it be put to the test and then if it is defective the remedy can easily be suggested and applied. Make all suggestions to R. A. Ogg, of Greencastle, chairman of the committee.

EVANSVILLE is to have its high school building enlarged, re-arranged and refitted and supplied with apparatus and appliances equal to the best in the country. The school has outgrown its present quarters and Superintendent Hester has a way of getting whatever is needed to place his schools along with the best. Robert Spear has been principal of this school for many years.

THE Southern Teachers' Association met at Hot Springs, Ark., Dec. 31, and was well attended. All the southern states were represented and the meeting was counted a great success. United States Commissioner was present and made an address and several talks, and N. C. Dougherty, President of the National Association, was also present and lent a hand. Southern educational interests are gradually gaining ground.

THE Public School Magazine of Vincennes, with Mrs. Anna C. O'Flynn as editor in chief, does great credit to the editor and her able corps of assistants. It is a five column, 24 page folio and is full of matter which will interest not only the people of Vincennes, but the public generally. The first issue is published in the interest of charity

It contains an interesting history of Vincennes and also a history of the Vincennes schools. The editor thinks that Vincennes is the place in which to hold the great centennial celebration in 1900.

THE Werner Company, of Chicago, has just published the third and last number of the first volume of the Transactions of the Illinois Society for CHILD-STUDY. While not voluminous, it presents some attractive and essential additions to the preceding numbers. Supt. Minard, of Maywood, Ill., presents a way of making CHILD-STUDY meet the practical requirements of every day school-work. Mrs. McMurry contributes a paper on CHILD-STUDY through the medium of the parent. J. Stanley Hall, Earl Barnes and others also contribute articles.

ADAMS COUNTY.—The public schools of Adams county employ one hundred and thirty teachers; of this number ninety-five percent were in attendance at a joint teachers' institute held at Decatur, December 21, 1896. In addition to the work given by home talent, Deputy State Superintendent Cotton and Geo. F. Bass favored the institute with some appropriate and valuable suggestions. The latter had "Gumption" for the entire institute and some to spare. Adams county has five township graded schools, and last year graduated forty-five pupils from the district school course.

WHITLEY COUNTY.—The County Teachers' Association met Jan. 11, for a one-day session. It was a day of quality rather than quantity. Mrs. McRae, of Purdue, was given four periods for talks on reading and literature. There was very little else on the program. Mrs. McRae's work delighted all grades of teachers and they felt that the talks were helpful. The inaugural address by Pres. Kaufman of the Larwill schools was a master production; and "Correlation in the Common Schools" by L. F. Chalfant, of the Churubusco schools, was an able digest of the Report of Committee of Fifteen. Supt. Naber made an effort to have every one of his 125 teachers present and he came within one of it. Only one was absent and this unavoidable. But there was an audience of 500, counting township trustees, pupils and patrons. How is this for interest in Whitley?

THE JACKSONVILLE MEETING.—You are aware that the Department of Superintendence of the National Educational Association convenes at Jacksonville, Florida, Feb. 18, 1896. It is very desirable that Indiana be well represented at this meeting, both on account of the richness of the program and because Indiana wishes to induce the Association to meet at Indianapolis in 1897. We missed the Association for 1896 by only a dozen votes at Cleveland. We then received promises that if we would come to Jacksonville we should receive the Convention in 1897. Please inform Superintendent Goss whether you can attend, and, if so, whether you prefer joining the party at Indianapolis or some point south. It is very desirable that the Indiana delegation should travel in one body that we may have better accommodations and that we may *en-route* lay our plans for effective work. Please write Superintendent Goss at once whether you can attend, and how many will accompany you.

Yours truly,
 Committee. { DAVID K. GOSS,
 { J. W. CARR,
 { D. M. GETTING.

PERSONAL.

MISS ORA PAYNE of Franklin, has accepted the position of Latin teacher in the Indianapolis high school.

PROF. R. J. ALEY of Indiana University, was kept from the State Association on account of sickness. He is all right now.

GEO. F. BASS, manager of the Y. P. R. C., reports that more than 30,000 books have already been sold. This beats all past records.

GEO. W. WORLEY has been chosen sup't of Kosciusco county, to fill the place made vacant by the death of E. J. McAlpine. The appointment is a good one.

MISS NEBRASKA CROUSEY, assistant superintendent of the Indianapolis schools, is on the program to read a paper at the National Superintendents' Association to meet in Jacksonville, the 18th inst.

ARNOLD TOMPKINS recently made the JOURNAL office a pleasant call. He has now met all the outside engagements made prior to his acceptance of his present position and will in the future confine his work almost exclusively to Illinois.

CHAS. F. PATTERSON, Sup't of the Edinburg schools, has been having serious trouble with his eyes. His many friends will be glad to learn that there has been a change for the better and that he will soon be able to resume all his duties.

A. C. SHORTRIDGE, for many years sup't of the Indianapolis schools has been out of the regular school work for many years, but he still keeps up his interest in educational matters. He never fails to come in and pay his annual dues at the State Teachers' Association.

W. H. ELSON, formerly of this state, but now superintendent of the W. Superior schools, read a paper at the Wisconsin State Association, on "The Correlation of Studies" which attracted unusual attention. Judging from the printed reports it was the paper of the meeting.

E. J. MCALPINE, superintendent of the Kosciusco county schools, died at his home Dec. 10. He had held his present position nearly nine years and was one of the best superintendents in the state. Kosciusco never had a more devoted or a more efficient superintendent. He leaves a devoted wife and a large circle of earnest friends to mourn his loss.

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THE Tri-state Normal at Angola is making special preparations for a large class of beginners in Latin in the spring term. Any one not able to enter the first week of the term should write to the Pres., L. M. Sniff, for suggestions.

SEE advertisement of the Dixon Pencil on another page.

THE MUNGER.—On another page will be found the advertisement of the Munger Cycle Company. There is no doubt that this company makes the best light wheel in the market. Only the best of material is used and every wheel is "*high grade*." It always pays to get the best. It is the cheapest in the long run. Call at office or write for descriptive circular.

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DANIEL K. WOOD.

DANIEL KIRKWOOD.*

PROF. ROBT. J. ALEY, INDIANA UNIVERSITY.

"When I die I want to go where Dr. Kirkwood goes." Such is the simple and yet forcible eulogy of one of his old pupils and to that sentiment every one who intimately knew him will give ready assent. His life so pure, so simple, so sweet and yet so powerful is certainly worth study.

He was of Scotch-Irish descent, his grandfather coming from Ireland and settling in Delaware in 1771. His parents were both born in this country. He was born in Hartford county, Maryland, September 27th, 1814. His early life was spent on the farm and he had only the usual advantages of the farmer boys of that day. His active mind was not satisfied with farm life, and so at the age of nineteen he quit the farm and took charge of a country school at Hopewell, York county, Pennsylvania. In this school there was a young man who desired to study algebra. He mentioned the fact to young Kirkwood, who told him he had heard of the subject and he thought it was something in which letters instead of figures were used in calculation. A patron of the school had a copy of Bonnycastle's algebra. This was borrowed and together teacher and student explored its mysteries. This year's work aroused Kirkwood's interest in mathematics and he became a worshiper at the shrine of the purest of all sciences. In 1834 he entered the York County Academy, York, Pennsylvania. His work there must have been of a high grade, for in 1838 he was elected first assistant and mathematical instructor. He held this position for five years, resigning in 1843 to become principal of the high school at Lancaster, Pennsylvania. In 1851 he took charge of the department of mathematics in Delaware College and in '54 was promoted to the presidency. He only held the presidency two years, resigning to accept the chair of mathematics in Indiana University. With the exception of one year, 1866-67, when he was professor of mathematics in Washington and Jefferson College, he remained in Indiana University until 1886 when, on account of age and failing health, he resigned. In 1889 he removed to southern California and passed the last years of

*Died at Riverside, Cal., June. 1895.

his life with a favorite nephew on an orange ranch at Riverside.

His natural bent for mathematics found its activity in application to astronomical problems. His whole life has been devoted to the teaching and to the study of theoretical and mathematical astronomy. Never having access to an observatory, he was content to take the observations of others and from them work out those broad generalizations and specific explanations that have been of such great value to astronomical science. He took the greatest interest in the work of observatories, and often keenly regretted that he did not have the opportunity of using one. When the object glass of the Lick telescope was being ground he said to the writer, "I shall die happier if I live long enough to get one peep through that great telescope." A few years ago he made the trip to Mt. Hamilton, and remained several days, the honored guest of the whole observatory force, but the clouds prevented the *one peep*. His disappointment was great, for he felt that at his advanced age he could never again make the trip.

Perhaps in his case the lack of an observatory was a real gain to astronomy. His peculiar strength was in the line of theoretical investigation. His great mathematical ability and his marvelous intuition especially fitted him for proposing, investigating and proving theories. An observatory might have turned him aside.

In 1849 he made public what is now known in Astronomical literature as "Kirkwood's Law." This at once gave him prominence. Because of this discovery, Proctor has named him the "Kepler of America." As this law has not yet found its way into many popular astronomies it is quoted here entire:

KIRKWOOD'S LAW.

"Let P be the point of equal attraction between any planet and the one next interior, the two being in conjunction; P' that between the same and the one next interior.

"Let also D = the sum of the distance of the points, P, P' from the orbit of the planet; which I shall call the diameter of the sphere of the planet's attraction:

" D' = the diameter of any other planet's sphere of attraction found in like manner;

" n " = the number of sidereal rotations performed by the former during one sidereal revolution around the sun:

" n' " = the number performed by the latter; then it will be found that,

$$n^2 : n'^2 :: D^3 : D'^3; \text{ or } n = n' \left[\frac{D}{D'} \right]^{\frac{2}{3}}$$

That is, the square of the number of rotations made by a planet during one revolution around the sun, is proportional to the cube of the diameter of its sphere of attraction; or, $\frac{n^2}{D^3}$ is a constant quantity for all the planets of the Solar System."

This law was subjected to a rigid mathematical examination by Lears C. Walker in the American Journal of Science, new series, Volume X, pp. 19-26. Dr. B. A. Gould, in the same number of this Journal, shows how the law supports the Nebular Hypothesis. The announcement of this law won for its author the notice and friendship of the leading astronomers of Europe. The strength and depth of some of the friendships is well illustrated by the following incident told by Judge Roach. While the Judge was in Rome he attended a reception where he met the distinguished astronomer, Father Secchi. The Italian astronomer paid very little attention to Judge Roach until it was learned that he was from Indiana. Father Secchi then became greatly interested and said, "Do you know Dr. Kirkwood, the astronomer of Indiana University?" On being assured that he did, the old astronomer was profuse with his attentions and throwing his arms about Judge Roach embraced him.

Dr. Kirkwood gave much attention and study to the subject of Comets and Meteors. In this field he was an authority. His two books, "Meteoric Astronomy," in 1867 and "Comets and Meteors," 1873, are both well known. Miss Clerke in her History of Astronomy, p. 381, in speaking of Comets and Meteors says:

"Professor Kirkwood, however, by a luminous intuition, penetrated the secret so far as it has yet been made known. In an article published in the Danville Quarterly Review for December, 1861, he argued from the observed division of Biela, and other less noted instances of the same kind, that the sun exercises a "divellent influence" on the nuclei of comets, which may be presumed to continue its action until

their corporate existence (so to speak) ends in complete pulverization. 'May not,' he continued, 'our periodic meteors be the debris of ancient, but now disintegrated comets, whose matter has become distributed around their orbits.' "

Many of his contributions to current scientific literature relate to comets and meteors. His study on these subjects has done much to verify and slightly modify the Nebular Hypothesis. When about fifty asteroids were known Dr. Kirkwood announced the theory that in those spaces where simple commensurability of motion with that of Jupiter occurs, there must be gaps in the asteroid zone. The theory was based on mathematical and physical facts. It was at once received with favor and in 1870, Proctor spoke of it in the highest terms. At present the large number of known asteroids goes far to verify this theory. There is scarcely a doubt that the physical facts underlying the law of commensurability have in the main regulated the distribution of the asteroids. Only two or three exceptions, the most prominent of which is the minor planet Menippe, are yet known. Dr. Kirkwood applied the same theory to the rings of Saturn and found that the breaks occurred just where commensurability of motion with Saturn's satellites would indicate they should be. Dr. Meyer of Geneva in a work on Saturn's Rings has worked out in detail the theory suggested by Kirkwood. Kirkwood calls attention to this in a communication to the American Philosophical Society and makes clear his claim to priority. He also expresses great gratification that so eminent an authority as Dr. Meyer should verify his theory.

His life was a very busy one. Its fifty active years were spent in teaching and his scientific contributions were made in addition to the duties of the school room which were never in the least neglected. Some idea of the magnitude of his scientific work can be gained from these facts: He wrote three books, "Meteoric Astronomy," "Comets and Meteors," and "The Asteroids," five articles in the Popular Science Monthly, eight in The Analyst, eight in the Indiana School Journal, twenty-three in the Proceedings of the American Philosophical Society, twenty-five in the American Journal of Science and Arts and twenty-five in the Sidereal Messenger. Besides these, a large number of his papers appear in the Proceedings

of the American Association for the Advancement of Science, and as his bibliography shows, a great many other periodicals were favored with occasional articles from his pen. All his writings are characterized by remarkable clearness and conciseness. The reader never has trouble in understanding him. He never said anything until he was sure of it, and then he said it so that others could readily comprehend it. His most remarkable theories and discoveries were conveyed to the scientific world in a few pages. Even in letter writing brevity was his custom. In the seventies a junior left college, went to Kansas, bought one claim and took out another. About a year after leaving college he received this letter:

"DEAR SIR:

"Sell one of those claims and come back to college.

"DANIEL KIRKWOOD."

In this, his adopted state, he was always held in the highest esteem. In 1859, the State Teachers' Association elected him mathematical editor of the Indiana School Journal. This department under his care was very strong. He contributed many notes, historical sketches, solutions and suggestions. After four years he resigned because of lack of time to devote to it. For many years he was the astronomical editor of the Indianapolis Journal. He wrote up the current astronomical events, giving especial attention to comets and meteors. It is safe to say that while he had charge of this work for the Journal, no paper in the whole country surpassed it in the trustworthiness of its astronomical reports. Up to 1885, he was employed by the Appletons to write the year's astronomy for their annual encyclopedia. The perusal of a single one of these articles gives convincing proof of his wide acquaintance with astronomers and their work. He discussed fully the progress in all lines of the science and in all countries. In astronomical science he will never die. Miss Clerke in her History of Astronomy in the Nineteenth Century mentions him in some six different places. Many of the noted astronomers knew him personally and loved him. Some years ago while Proctor was visiting in this country he lectured in Indianapolis. After the lecture he was invited to go to a neighboring town and lecture the following night. Proctor said: "No; I came to America to see Daniel Kirkwood.

To-morrow is my opportunity and I am going to Bloomington to see him.

In 1885 when Dr. Swain was studying in the University of Edinburgh, he desired to enter the Royal Observatory as a student. Finding some difficulties in the way, he was finally told by an eminent professor that a letter from Dr. Kirkwood would do more to secure his entrance to the observatory than anything else. He secured the letter and on sending it to Dr. Smythe, the director of the observatory, he was at once admitted. In the letter granting the admission, the Astronomer Royal says of Dr. Kirkwood: "His is a truly great name in science, with a world-wide renown."

By far the largest number of those who knew Dr. Kirkwood intimately knew him as the genial, kind-hearted, sympathizing teacher. In the fifty years spent in the class room, he came in contact with many thousand young men and women, and so far as is known, every one of them loved him. The new student who entered Dr. Kirkwood's class for the first time felt, when he looked into that happy face and saw those eyes twinkling with good humor and kindly sympathy, that he had found a friend. And he had.

Dr. Kirkwood taught at a time before evolution had brought the college curriculum to its present condition. He taught required work. Many of those in his classes took the work from compulsion and not from choice. Perhaps his great sympathy may have sometimes made him too lenient with the latter class. To the interested student he was an inspiration. He had unusual ability in making the most difficult objects clear and simple. He was able to see almost instantly the student's real difficulty and to clear it up at a single stroke. His blackboard diagrams and solutions were models of neatness and beauty. He never tolerated either slovenly thinking or working.

He had a habit in the class-room of doing many things by gus. If he wished the work erased from the board, he indicated it by a system of motions, and so if he wanted a door opened or closed, or a window raised or lowered. One spring day he wanted a window lowered. He pointed out a student and then motioned to the window. The student did not understand and so he repeated the motions more vigorously than

before. The student still failing to understand, the gesticulations became more emphatic. Finally, thinking that something must be done, the student rushed to the window and jumped out. So far as is known from history or tradition, this is the only time in Kirkwood's professional life when the joke was on him. Few men of so great reputation were so modest as Dr. Kirkwood. He never gave himself prominence but was always anxious to help others forward. Modesty formed one of the most attractive elements of his character. It was this that endeared him to the common people. His neighbors loved him because he was to them a common man and not the great astronomer. His modesty also prevented him from getting into acrimonious disputes with other scientists. He would suffer wrong rather than denounce any one.

In 1885 he was requested to prepare a complete list of his writings. He refused by saying, "Whatever of worth I have written the world will find out; that which is unworthy will be better without mention." Early in '94 the writer attempted to form a list of his papers. After it was made as complete as possible, a copy was sent to him with the request that he look it over and make whatever additions and corrections were necessary. The following answer was received: "I am unable to work. The list seems to be correct. Publish it as it is. If there are omissions it makes no difference."

In his personal relations with men he was the very soul of honor. If he ever wronged a fellow-man or did an ungentlemanly act, it has never been heard of. The writer well remembers his first visit to Bloomington. He went into a barber shop, and it being a rainy day, there was gathered there quite a crowd of men of all classes. By chance, the conversation turned to men. Every man found his ideal in Daniel Kirkwood. Not even the disappointed cynic found in him anything to criticise. No man ever received a higher tribute of praise. His life was so pure and true that in him the student, the philosopher and the common man all found their ideal.

In religion he was a Presbyterian. He was an active and helpful member of the church. Although a strong believer in the Westminster confession, his broad mind had charity for all who in any way tried to follow the Nazarene. His study

of the stars but strengthened his belief in God. To his mind, with its faith strengthened by an almost infinite grasp of the mightiest works of God, unbelief was impossible, and he could hardly understand how honest unbelief could exist in another. Once in a class-room, after finishing a beautiful demonstration, a student asked, "Is that always true?" "Yes," said he, "as true as that there is a God in heaven." "But," said the student, "what would you say to him who does not believe in God?" Straightening up to his full height and with glittering eye, he said, "I would try to keep my temper and get away as quickly as possible." No stronger argument for the Christian religion was ever made in the city of Bloomington than the simple ever-yday life of this noble man.

It is fitting in closing to give three estimates of his life. A student of his, now a well-known professor, said in a lecture a few years ago: "The specific lessons of the class-room, the formulae and theorems of my college course have long since been forgotten, but there is one thing worth more than all else, that will ever abide—the lesson in true living given me by my daily contact with that noble astronomer, Daniel Kirkwood." An old neighbor says: "Kirkwood with the strongest intellect, save one, of all the men I have known, combined the simplicity of a child and realized in his actual life his ideal of beauty of character and purity of soul. Nothing gave him more happiness than to be brought into relation with men and to be of service to them. Whatever the world has gained from Kirkwood as a teacher of science, it has gained infinitely more from Kirkwood the man. His face is to me a blessing." A new neighbor of Riverside says: "Although so well known throughout the country in scientific circles, the people of Riverside generally were not intimately acquainted with the modest, genial gentleman who had made this city his home for the past few years; but those who were so fortunate as to know him will feel that no change will need to come to fit him for life on the other shore."

How can a teacher interest primary pupils in their work?

By being interested in it yourself, without being so intense as to annoy them; by keeping them very busy with their work in a sensible way; by having something new every day; by having work in which they will be interested; by being as much in sympathy with them as children as you can.

WRITING IN THE PRIMARY SCHOOL.

BELLE THOMAS, COOK COUNTY NORMAL SCHOOL.

In the average primary school writing serves but two purposes—a means of testing on the teacher's part and a never ending round of "busy work" for the pupils. The latter is too often harmful instead of an element in healthful development.

The school visitor too often finds restless, creative little beings bending over slates or paper and with cramped, wearied hands writing for mere occupation. Possibly this visitor may find the children tracing words or perhaps writing each word in the spelling lesson twenty times. Such work soon becomes drudgery to the child because it does not appeal to his needs. He may, for a time, be kept at it through threats or promises, but the listless, uninterested way in which this busy work is usually done should be proof enough to the thoughtful teacher that there is something wrong. More than this it is harmful because it cultivates habits of inattention, and does not lead to the expression of thought.

Plato says, "A slave is one who cannot express himself." Primary teachers, do you ever find such slaves among your children when you ask for the use of the words just learned in the spelling lesson in the telling of a story or experience with pen or pencil? If the copying of those words was for the purpose of learning them why does his newly acquired knowledge fail him just as soon as the expression of original thought is demanded? This failure is due to several reasons—first, in copying, his attention is directed to the form of the word and this entirely divorced from thought; second, we are forcing the child to use new methods. Writing does not differ so much from speech but that the experience gained in learning to talk may be used directly in acquiring this new means of telling his thoughts to others; indeed, the mechanics of writing are far more simple than those of speech.

Children as a rule are not reflective beings, their impulse in play or work is to give as they receive. The rule of their lives is *to do* unless hampered by rules and directions. In their observation lessons and while learning to read, writing may be made the outgo, as it were, of the impressions they

have received. In fact, writing may be so presented to these beginners that they will use it with all the energy, interest and pleasure shown in speech when relating some pleasant experience. This motive to tell something and tell it rapidly adds an interest and power to the child's expression whether it be writing, drawing or painting which every thoughtful person must recognize as helpful. To make writing an effective means of expression he needs to use it as an immediate means, not using it that the teacher may find out whether he knows it or not, but rather that he may tell her and his classmates something that is his own not theirs;—not an observation lesson where the child does no writing, next a "busy word" period for copying and this followed by "written language." In this program the same subject may have been used throughout; the same vocabulary even but time and energy are lost both with teacher and pupil because there was no immediate expression of intrinsic thought.

"But how can the child write words which he does not know?" I hear some one ask. By having a real interest in the thought presented, seeing the form as the teacher writes it and then attempting to write the word while his interest is at "white heat." We have not faith enough in the children, we feel that the mechanics of writing and spelling are difficult and then deliberately place obstructions in the way. Imagine, if you can, a child saying over and over again, day after day the exact words of a mother or nurse. No mother would think of giving such drills in pronunciation and yet her child has learned to talk.

The blackboard and crayon seem to furnish beginners the best place and material for his first writing. Every primary teacher knows a child's delight in marking upon the blackboard. The large space and thick crayon give ample room to make the "big" words and pictures so dear to his heart. Here, too, all his movements in writing are made from the shoulder and not with fingers as when using the slate pencil. Slates and pencils should be discarded from our schools as fast as possible. After the child has pinched a slate pencil for a year or more he has acquired a position of hand and fingers that makes pen writing a tiresome task. Let him

have the crayon and blackboard the first year and the pen and ink ever after.

Another serious mistake in our primary writing is in forcing the child to draw his words in ruled spaces on slate or paper, his entire attention being given to relative height of letters, and the careful analysis of these letters into their elements. These are one and all positive hindrances. When we are really thinking and attempting to express that thought, would we submit for a moment to the conditions which we impose upon young children? In writing as in speech, a forced attention to the medium detracts from the thought. The child like ourselves needs to write rapidly to have his expression keep pace with his thinking. The child's intensity of gesture and rapidity of speech is measured by his interest in the subject, and in writing his very intensity of thought will lead him to make large, rapid strokes unless hindered by too many precautionary words from the teacher. Do not think that poor and careless writing is advocated, I only ask for such freedom as we demand when thought is impelling us to action. In the beginning, we must be willing to accept crude results for the child's images are crude at best, but if he has put into that bit of expression his best effort, the teacher should recognize it as such and accept the result. In the mechanics of writing, as elsewhere, imitation must of necessity be an all important element, and here is where the teacher becomes of vital importance to the child in his acquiring skill. His advance will depend largely upon her ability to write rapidly and correctly, her right doing before his very eyes day after day must become a great power and inspiration to him.

The world is calling for originality. Lack of individuality is one great objection to our public school system. But how can we hope for a change so long as the child is trained from his first day at school to copy some one else, even lured by percent. or prize to reproduce exactly, line upon line, the copy some one has set for him. From ruled slate to copy book with additional help of the daily drawing lesson when the printed card furnishes the ideal towards which he strives, and what has he in the end? Skill to copy some one else rather than courage to reproduce his own image even though it be crude. Can we, primary teachers, do anything in our daily

leading of the little children to break this spell, can we not change this fetich "Perfect Form" to a strong demand for genuine expression?

UNIFORM COURSE OF STUDY.—FIRST YEAR'S WORK.

R. A. OGG, GREENCASTLE.

The course of study outlined by the committee in its report recognizes three general lines of work denominated *Culture Studies*, *Nature Studies* and *Formal Studies*. These terms must not be taken in too specific a sense or they will be misleading. To suppose that the Culture Studies have no science in them and nothing formal about them and that the Nature Studies and Formal Studies have each nothing of the other nor of the culture element, would be to misconstrue the whole purpose of the report which designs to show that each has so much of the others that this relation should not be disregarded in teaching and endeavors to indicate many of these relations. History and literature have long been termed humanities because of their peculiar relation to human activity and thought. It is not because they demand more thought than those denominated studies but that they *are thought*, and because of this have a high value in themselves, influencing life and character by their very content irrespective of any mental discipline they may secure. And this fact should be in mind in teaching them, that they may perform their function. The Nature Studies have for their province the works and forces of nature as distinguished from those of man. While calling, in a general way, for the exercise of the same faculties as the culture studies, they make greatest demands upon the physical rather than the spiritual eyes, and are designed to cultivate the powers of observation of the external world. This training rather than mental discipline is their primary purpose. They have high disciplinary value, but not more so than the studies classed as formal or culture. The scientific method in its strict sense is not the true method in this work, especially in the lower grades. The real end to be attained is to open the children's eyes and minds that they may see the beautiful and wonderful things about them, receiving

joy and possessing themselves of ideas which shall be of utility in life and of value for expression in other forms of mental activity. The geography work is placed under this head, for while it deals largely with man and has close relation to the culture studies in this particular, it more especially deals with the physical features which adapt the earth for man's abode. The formal studies include all those in which thought seeks a form in which to embody itself and studies the form that it may find for itself a more complete and varied expression. Music, drawing, writing, arithmetic, spelling, reading, are modes of revealing thought and should be taught with this in mind. The idea that they do not demand as high an order of thinking, are not as valuable for mental discipline and do not have as great practical value in life, is not only not suggested by this report but is practically denied by the proportion of time allotted to them in the schedule of time. Formal, or form study is quite different from formalism in teaching, and the classification of studies was designed to emphasize the fact that the form will be best mastered when from the content studies thought is utilized to put soul into the otherwise lifeless form. Modes of expression will have most value in the eyes of pupils when they find them fit vehicles for the conveyance of thoughts which they struggle to express because they are beautiful and useful.

If now the real significance of the classification of studies is made sufficiently clear, we are ready for the consideration of the inter-relations which are assumed to exist among the studies classed under these heads; and the remainder of this paper will be devoted to the work planned for the first year of public school life.

The child enters school at six years of age with a very considerable store of unorganized ideas and knowledge. He is now to begin the acquirement in a more systematic way. It is a new world to him and it is of great importance that he should be introduced to it in the least abrupt way. The material he already possesses should be utilized, the methods of thought to which he is accustomed should be first employed and he should as quickly as possible be put at ease in order that, free from the natural constraint of his new surroundings, he may reveal himself to the inquiring teacher. Parents

have gratified his fondness for stories and have repeated for the hundredth time the nursery rhymes which to them were a mere jingle of words, but so full of charm to him, and the teacher will do well to begin at this point. The story of "The Old Woman and Her Pig" is introduced for this purpose. The simplicity of the story, the reiteration of words and repetition of familiar images all appeal strongly to him. He will bring from his home autumn fruits, he will gather the beautifully colored leaves, he will delight in the flowers, and without his being conscious of it, he may be led to talk freely regarding these things and to investigate them for the purpose of learning more about them. And thus he has been introduced to the realm of thought and oral composition. While he is using his eyes in studying the leaves he has brought, his imagination may be delighted with the story of "The Anxious Leaf" and "How the Leaves Came Down," told to him by the teacher. With his study of flowers he will be charmed with the beautiful myth of "Golden Rod and Aster," etc. When he is interested in the insects gathered by himself and others, the myth "Arachne" will add much to the spirit with which he works, and the effects of Arachne's pride and her refusal to learn from Athena, the goddess of wisdom, will not fail to impress him in his relation to his teacher. "Friends" will lead to a conversation on kindness, and seeing it in leaves personified will make the impression the greater because of the poetic element in it. "The Palace of Alkinoos" and "Swan Maidens" will give him glimpses of the hidden beauty in clouds and raindrops and snowflakes and at the same time give him ideas which he will find again in the prose of his science study. I remember to have heard Prof. Griggs, formerly of Indiana University, say in an address, "What we need is not so much to realize the ideal as to idealize the real." What a great sense of loss often comes over me when I reflect that in all my boyhood days in the country, no teacher ever led me to see and consciously enjoy the beauty spread everywhere about me!

From the various stories and myths and fables will be taught without the teacher's pointing the moral, the failure of selfishness, the folly of pride, the mistake of complaining, the reward of kindness, the beauty of generosity, the blessing

of sympathy and tenderness, etc., and this by means of child literature which is recognized as classic. And simultaneous with this and in part growing out of it, his drawing, music, etc. will be going forward. He will sing songs adapted to the work he is doing in the two other lines, he will draw leaves and color them, he will count the fruits of various kinds and the petals of flowers, he will utilize his knowledge of numbers in the physiology work planned, he will make stories from the ideas in his mind which the teacher will put on the board and let him read. While he is taking the beginning steps toward systematic drawing in clay-modelling, his tendency to do things by impulse or become of some present interest, will have recognition, and he will with freedom from constraint, attempt by drawing and modelling to express the forms he has studied, as leaves, fruits, etc., and the images he has in mind from the culture work, as golden rod and aster, Cinderella, the Street Musicians, etc. The meteorology and astronomy will not signify much to him at first but it is cumulative in its interest and value and, taking so little time, will be rather a diversion. His reading in this year is largely mastery of the forms by which thought is expressed and training in the vocal utterance of thought already in mind. Thought-reading, the acquisition of ideas from printed forms, is rather culture work and so the report indicates for each year. But there is need of much drill in ready recognition of words and oral expression of thought. If new reading matter that has in itself value is supplied, the ideas made clear and then proper drill in vocal utterance given, the reading lesson has been a success. Leave out any of these and it is a failure. Only an epitome of the year's work has been given, but it is hoped enough to suggest the scope and character of work had in mind by the committee.

THOUGHTS SUGGESTED BY THE TERM APPERCEPTION.

CHAS. A. M'MURRY, NORMAL, ILL.

Only a year or two ago the simple mention of the term *apperception* would cause a gentle ripple of smiles to play across an audience of teachers. In fact the same merry

response would greet the use of this term to-day in many educational gatherings. But by those teachers who know its meaning the term is already accepted, its value appreciated, and the spirit of controversy centers now around other ideas such as concentration, child study, culture epochs, &c. There are probably thousands of teachers who are not yet familiar with the word apperception, but its message will be delivered to them in due time. It is very natural for those long accustomed to use other words or phrases of like import to resent the introduction of a new term in psychology or pedagogy. Many thoughtful teachers see nothing more in this word than in the old familiar maxim *Proceed from the known to the unknown*, and it certainly includes this idea. Yet it has an intenser meaning and probably a wider one than that old phrase. It vitalizes the motion *from known to unknown* by showing the energies resident in our accumulated knowledge and experience when properly gathered up and focused upon any new thought problem.

The question is how to economize mental effort, how to make quicker and firmer conquests in new fields of knowledge by organizing the interpretive force of familiar ideas and bringing them to bear upon the new lesson. From the standpoint of apperception our acquired knowledge is not a static accumulation of ideas but old ideas in motion toward new goals. Old ideas are constantly flowing on modifying and interpreting new experiences. So constant and immanent is this apperceiving energy of old ideas, that it is present in all our unpremeditated thought as well as in voluntary mental efforts. Apperception is a deep undertone in all our thinking. The question is how far this natural energy of apperception may be increased by the forethought and skill of the teacher as he guides the minds of children along the paths of acquisition.

It may be that the psychologist can get along without this term, using other terms in its stead but in pedagogy it stands for a new impulse and a new insight into educational processes. The great strength and scope of this doctrine of apperception (as compared with the old idea *from known to unknown*) is best seen in the aggressive encroachments it is making upon the old notion of *formal mental discipline*. The

theory at the bottom of this long cherished notion of mental discipline is that the power gained through the discipline of certain studies remains even though the knowledge be totally lost. Power to achieve, to overcome difficulties in the problems of life—does it depend upon knowledge accumulated and retained or upon severe mental discipline once endured? Our course of study and our methods of teaching have been based heretofore (mainly) upon the idea of formal mental discipline. Apperception lays great stress upon the accumulation of the best ideas, upon their organization and constant use. It recognizes the positive power and influence of any person in a given field who has mastered and organized its materials so that he can bring them to bear on a given point when needed.

Apperception, therefore, not only has a word to say about the method of teaching or learning any subject, but about the selection of the best studies of the school course, and about the proper relation and interdependence of these studies.

Apperception covers the whole field of child experience, not simply the intellectual but the feeling and willing also. It has been the custom in discussing instruction to think only of the intellect and will and their exercise. But the feelings also are subject to this law of apperception. To appreciate the feelings of others and to sympathize with them we recall our own feelings under similar conditions. In the same way our previous acts of will come in to re-enforce our efforts in present emergencies. It is not intended to imply that knowing, feeling and willing are distinct modes of mental action, but one or the other may characterize a mental state. The broad scope of apperception is also manifest in the stress laid upon knowledge not gained in school. Knowledge or experience gained from whatever source is significant according to its interpretive power. In fact, knowledge picked up by children in the stirring and often impressive scenes of home and neighborhood exercises much greater influence upon the mind-development of children than the ideas gained in the school.

It is only too manifest that this close dependence upon the children's own experience and accumulated ideas and feelings

compels the teacher at every step to work from the standpoint of the child, and not of the child in general but of the particular personality and bundle of experiences with which he is dealing. When applied to the work of instruction and of discipline the principle of apperception tends powerfully towards a sympathetic, kindly, appreciative treatment of children and to a watchful regard for their individual traits and peculiarities. It points, therefore, unerringly to the pedagogical side of child study. In the midst of his school work and worry the teacher should be habitually and by second nature if not by first a close and sympathetic observer of child nature.

THE NEW EDUCATION.

W. W. PFRIMMER, KENTLAND.

In this wild Herbartian rage
Is there nothing to assuage
Just a little of the nonsense that it brings?
For these fads it seems to me,
That were brought across the sea,
Like the German carp, may prove unwelcome things.
But when once their ardor cools,
The professors in our schools
May be able to discover in due time,
That when rightly understood,
There is something just as good
That has always been a native of our clime.
Until then I must insist,
(For at least they can desist)
From the use of words beyond the reach of men
Who have never been to Jena,
But live here in Indiana
With a sort of Hoosier limit to their ken.
Now for instance, what the nation
Do they mean by "Correlation?"
Is it mixing things a little like our teacher used to do?
Taking History and Reading
And by mixing them, succeeding
In thus making one recital do for two?

Or Geography and Spelling—
 I declare there is no telling—
 But I'd like to have these college fellows state
 How the Sam Hill do they do it?
 How they ever can get through it,
 When two things won't—as they call it—"correlate?"

Oh, I cannot help but smile,
 For I knew it all the while,
 They just have to let them—"differentiate,"
 And I sometimes have a notion
 To get up and make a motion
 That we give them *corral-ation*, small and great.

And they practice rank deception
 With their big word "apperception"
 When they try to make us think it something new;
 Why the master with his gad,
 In the days when I was bad,
 Often gave me apperception good and true.

But there is no recompense
 For a lack of common sense,
 And we'll have to wait a little, for our laugh;
 Then we'll gather up the grain
 In a thimble, while 'tis plan
 There is something like a ton or two of chaff.

ANALYSIS OF HENRY VIII.

JONATHAN RIGDON, DANVILLE.

ACT IV.

After the third act of the play, Henry VIII is much weaker in both thought and action. The great characters are all gone. No more Buckingham to be tried, convicted and executed. The great Wolsey has fallen. The good Queen is almost entirely out of the play. Also the important conflicts are all ended, and the play itself, like its much mistreated heroine, must drag its weary life along to its uninteresting end.

Scene I.—Here in a street in Westminster, meet the two gentlemen whose conversation was given in the first scene of the second act. There they meet in a street in London and talk over the fate of Buckingham. Here they have come to behold the Lady Anne pass from her coronation.

The thought of Anne makes the second gentleman ask, "What's become of Catherine?" The first gentleman tells him that Cranmer together with all the great colleges of the land has declared her marriage with Henry null and void,

"Since which she has removed to Kimbolton,
Where she remains now sick."

"Alas, good lady," exclaimed the second gentleman, and then in the same breath,

"The trumpets sound: stand close, the Queen is coming."

The remainder of this scene is taken up with a description of the great procession that escorted the new queen to and from the place of her coronation, and the conversation of the two gentlemen concerning the great act. They praise the new queen very highly and tell how men threw up their hats and cloaks and made a very tempest of applause when Lady Anne appeared before them.

Scene II.—This scene is mostly taken up with the conversation between Catherine and her good man Griffith, the chief subject of their conversation being Cardinal Wolsey who is now dead. Griffith tells her very pathetically how the great but wicked Cardinal became humble and full of repentance after his fall, and begged for the charity of a little earth to lay his weary bones in. Catherine listens and says,

"So may he rest; his faults lie gently on him."

Then, unable to forget the evil that Wolsey has done her, she proceeds to give us a very plain and doubtless a very correct estimate of Wolsey:

"He was a man
Of an unbounded stomach, ever ranking
Himself with princes; one, that by suggestion
Tithed all the kingdom; simony was fair play;
His own opinion was his law; i' the presence
He would say untruths, and be ever double
Both in his words and meaning: he was never,
But where he meant to ruin, pitiful;
His promises were, as he then was, mighty;
But his performance, as he now is, nothing:
Of his own body he was ill, and gave
The clergy ill example."

Ordinarily, it is certainly not becoming to speak ill of the dead. But certainly Catherine has good reason to be unable

so soon to forget Wolsey's injustice toward her. But just as there is some good down deep in the natures even of the meanest of men, which is visible only to the truly good, so the good Griffith perceives some good in the great but wicked Wolsey and proceeds to say to Catherine—

"This Cardinal,
Though from an humble stock, undoubtedly
Was fashioned to much honor from his cradle.
He was a scholar, and a ripe and good one;
Exceeding wise, fair-spoken, and persuading;
Lofty and sour to them that loved him not;
But, to those men that sought him sweet as summer.
And though he were unsatisfied in getting—
Which was a sin—yet in bestowing, madam,
He was most princely. Ever witness for him
Those twins of learning that he rais'd in you,
Ipawich, and Oxford, one of which fell with him,
Unwilling to outlive the good that did it;
The other, though unfinish'd, yet so famous,
So excellent in art, and still so rising,
That Christendom shall ever speak his virtue.
His overthrow heap'd happiness upon him;
For then, and not till then, he felt himself,
And found the blessedness of being little:
And, to add greater honours to his age
Than man could give him, he died fearing God."

Good seldom comes from speaking ill. It always comes from exhibiting good, though it lie even in wicked natures. Thus Griffith, by telling his queen the good of Wolsey, doubtless kept her from dying with the sin of hatred in her heart, for she answers:

"After my death I wish no other herald,
No other speaker of my living actions,
To keep mine honour from corruption,
But such an honest chronicler as Griffith.
Whom I most hated living, thou hast made me,
With thy religious truth and modesty,
Now in his ashes honour."

Catherine falls asleep and in her vision appear six white-robed personages wearing garlands of bay upon their heads and holding branches of palm in their hands. They congregate and dance around Catherine, and in many ways give token of respect for her. But what means this introduction of spirits upon the stage? Let it be noted that they appear

only to Catherine, and when she is sleeping her last sleep of life. Then what means the vision? It was the objectification of a dream, a very ingenious dramatic artifice enabling the audience and the reader to behold the last thought and feeling of the dying Catherine. It was the good queen's death-dream of her reception among the angels, thrown upon the canvass by the magic of the poet. Catherine awakes, a messenger appears announcing Capucius, Lord Ambassador from the Emperor of Spain. Catherine asks what is his pleasure with her, and he tells her that he comes first to pay his own respects to her and next by King Henry's request, who he says grieves much for her weakness. Catherine is pleased, but tells Capucius—

"That comes too late;

'Tis like a pardon after execution:

That gentle physic, given in time, had cured me."

Catherine then sends a letter to Henry commending to him their daughter, Mary, and begging him to be kind to her women and to her men. Her last words to Henry, who had so deeply wronged her, are words of kindness. Her last thought is of the dignity of her position.

"When I'm dead, good wench,

Let me be used with honour: strew me over

With maiden flowers, that all the world may know

I was a chaste wife to my grave: embalm me;

Then lay me forth; although unqueen'd, yet like

A queen and daughter of a king, inter me.

I can no more."

ACT V.

Scene I.—The first part of this scene is devoted to a conversation between Gardiner, Bishop of Winchester, and Sir Thomas Lovell, in which a suggestion of the birth of Elizabeth gives Gardiner occasion to say:

"The fruit she goes with

I pray for heartily, that it may find

Good time, and live; but, for the stock, Sir Thomas,

I wish it grubb'd up now."

Lovell agrees with the thought, but admits that Queen Anne is a good creature deserving better wishes. Gardiner then pays his respects to Cranmer and Cromwell by saying that things will never be well till they both sleep in their

graves; and he further adds that he has already incensed the lords of the council against Cranmer, and that they are to try him as a heretic. Gardiner says also that he has spoken his mind to the king concerning Cranmer. Here the king enters and Cranmer himself comes into his presence. The king tells him that he must be tried by the council and that probably they will send him to the tower. But the honesty and sincerity of Cranmer calls forth the king's sympathy, and Henry tells him not to fear that he will protect him from the sentence of the council. This he does by giving Cranmer a ring by which he can take his own cause out of the hands of the council and rest it with the king.

Scene II.—Here we are in the Council-chamber. Cranmer standing on the outside has been refused admittance. Dr. Butts sees him and tells King Henry of the shameful treatment. He and Henry then conceal themselves and watch the proceedings of the council. Cromwell, the secretary, states the object of the meeting to be the trial of Cranmer. A little later it develops that the charge against him is that of heresy. Gardiner seems to be the leader in the denunciation of Cranmer, and advises that no gentle methods be adopted for dealing with such a dangerous man. Cranmer speaks in his own defense, but his words are of no avail. Cromwell advises moderation in the prosecution and tells Gardiner that he is a little too sharp in his accusations. This brings on a spirited quarrel between Cromwell and Gardiner which the chancellor abruptly brings to a close. Then they all agree that Cranmer shall be committed to the tower. But by means of the ring he takes his cause out of their hands, as the king had directed. Here the king himself enters and very severely rebukes Gardiner and all his followers for their conduct toward Cranmer, and tells them to embrace Cranmer and be his friends. And so they do with all the affection of their arms. Then the king tells Cranmer that he must preside over the baptism of his new born daughter.

Scene III.—This scene is not worth talking about. It is located in the palace yard and great crowds of hoodlums have collected simply that they may stand in the yard during the baptism of the child. All is tumult, vulgarity, profanity, noise and nonsense.

Scene IV.—Here we are within the palace and the scene is more dignified than on the outside. The lords and noblemen enter in majestic procession, and Gardiner in great solemnity pronounces the first speech:—

"Heaven, from thy endless goodness, send prosperous life, long, and ever happy, to the high and mighty Princess of England, Elizabeth." Then after the other necessary formalities, Cranmer speaks the prophetic words descriptive of the greatness of Elizabeth's reign. He says that she shall bring a thousand blessings to her land, and that after her shall come another,

"Who from the sacred ashes of her honour
Shall star-like rise, as great in fame as she was,
And so stand fix'd: peace, plenty, love, truth, terror,
That were the servants to this chosen infant,
Shall then be his, and like a vine grow to him:
Wherever the bright sun of heaven shall shine,
His honour and the greatness of his name
Shall be, and make new nations: he shall flourish,
And, like a mountain cedar, reach his branches
To all the plains about him. Our children's children
Shall see this, and bless Heaven."

DEPARTMENT OF PEDAGOGY.

Conducted by ARNOLD TOMPKINS, Chair of Pedagogy, University of Illinois, at Champaign.]

QUERY TO THE EDITOR.

"Will you please answer the following in your JOURNAL?
Can general notions be formed without the aid of some one?
Explain the difference between a general notion and the language which expresses it."

To the first, yes. If one can think without some one to help him he can form general notions without aid; for he can not think without forming general notions. Help is not more essential to the child's formation of the general notion than it is to his formation of individual ideas, or notions. And neither can be formed without the other.

As to the second point, the statement itself explains the difference between a general notion and the language which expresses it. It is simply the distinction between symbol and thing symbolized.

GROWTH.

Certain reformers who imagine they stand upon the skirmish-line of progress speak of the new education as if it were a thing complete in itself, and entirely separated from the old. There is not and there cannot be, any present which has not its roots in the past.

We need not look for revolutions in education, nor in aught else on this terrestrial ball. In all growth, "the thing that hath been, it is that which shall be." The corn develops as gradually to-day as when Comenius was on the earth, growing rapidly or slowly, as the conditions may determine. There are no revolutions in the growth of plants; the oak-tree does not thrust itself before the other trees of the forest as an exponent of the new education; it silently grows and develops. Our brethren of the revolutionary school point us exultantly to Nature, and so do we; and her teachings as to growth and expansion we are content to follow.—*Western School Journal*.

PSYCHOLOGY IN THE HIGH SCHOOL.

There is a general prejudice against the study of psychology in the high school on the ground that it is too abstruse for pupils of high school age. But it is the very fact that pupils are of high school age that makes the study of psychology in the high school so appropriate.

The argument against this study on the ground of its difficulty has no force whatever. A certain phase of any study is too difficult for a high school student; and a certain phase of any subject is easy enough for a primary student. One might fairly argue that astronomy is too difficult for a high school, yet a child in the grades can profitably study the stars. The study of geology sounds imposing enough; but it is certainly a mistake to give the child in the grades no notion of the obvious fact on which the science rests. Long before the pupil reaches the high school he observes and classifies mental phenomena. If the student should wait to begin the study of psychology till he can fathom its depths easily he will not begin it. The college student will still find the study too difficult for him.

I think the charge of "too difficult" comes from those who have justly formed prejudices against the old technical psychology which reduced the soul to definitions and outlines. If we should substitute for such barren and repulsive study the study of—life-lifeology—the difficulty is at once solved. No study is easier and more delightful to high school pupils than the study of life, as all will testify who have taught this subject. It makes a direct appeal to their own experiences, and arouses interest by its close touch to their life problems. Let the pupil be directed to the study of life as he himself lives it and knows it and the abstruse difficulties of psychology will disappear for the most vitalizing, invigorating, and, therefore, most interesting studies in the course. But let us give more definite reasons for the study of psychology in the high school.

The complete education of a person requires a movement through a circle. The child, including the first few years of school life, is absorbed in the objective world; has an objective consciousness. But through reflection upon the objective world, he becomes conscious that he is other than the thing he thinks; that he, too, is a center of force, of creative activity. He now has a subjective consciousness, and through this discerns that there is a realm of spiritual laws and forces, as distinguished from the realm of physical laws and forces. In the third step of his development he discerns his own nature in the objective world; identifies himself again with that world; but this time without losing his own identity, as in his first connection with it. Such is the circle described by the course of the completely developed individual. Now the high school is the arc of the circle between the first and the second phase of objective consciousness. The student must pass through the phase of becoming aware of himself; and that this period bear its full import he should become as clearly and definitely aware of himself as possible. It certainly is a great blunder to send the pupil from the high school, perhaps the end of his school course, without having revealed to him the nature and laws of his own life; and through this the nature and laws of the world of spirit and reason. The student, to become well educated, must reach the conviction that spiritual rather than physical

laws rule the world; and how is he to realize this except through the insight gained by a study of his own spiritual life. He can perceive the ultimate principle and power of the world only through his own personality,—his own self-activity.

We hear much in these days of the period of adolescence; and yet we seem unwilling to take the fact at its real worth. This is the period in which the student becomes conscious of himself, and begins to take a lively interest in himself. This is the age of the dawn of accountability; the individual becomes accountable for himself to himself. Or, it is the beginning of responsibility; the individual begins to respond to the demands of his ideal, true, other self, which now begins to demand recognition. Longfellow put the banner "Excelsior" in the hands of a youth. The high school age is the time when ideal worth knocks for recognition, and strives to take control of the life under the highest claims of manhood and womanhood. For this reason high school life is a critical period. The teacher now has much to do in determining whether the student choose the easy going way of common place life or whether he take the rugged mountain way to the holy city. Any phase of the pupil's development is a critical one, but the high school phase is peculiarly so; and no where in the course is the guiding hand of the divinely gifted teacher more needed. In view of these facts it is a question whether any other study has the beginning point so clearly marked as that of psychology.

And the foregoing facts indicate but half the truth. It is expected that the high school student will gain a deeper insight into and a reflective knowledge of, the studies he pursues than he has been accustomed to do in the grades below. In fact this deeper view is what constitutes them high school studies. The student is not dealing with new materials, but is making a conscious organization of his subject matter. He is now, as in the grades, studying history, literature, science, mathematics, etc.; but he now should see these subjects in new aspects. He is now living in a new phase of thought, and yet in relation to the same old material. He should now begin to see things as organized through processes and products,—should touch the logic and

life of things. He is not simply reading literature, but he begins to reflect on the nature of literature, and to discern its laws. History no longer consists of the panorama of events, but the life and logic of those events must be sought out. Grammar is not merely drill for correct habits of speech, but a study of the relation of language to thought. Science now must assume strictly a scientific form; the facts must be co-ordinated by the laws of thought. How psychology is the instrument in all this work is too obvious to need explanation. So potent would this study be that its introduction would be an economy of time, rather than an added burden to the already overburdened course. For instance, in the case of English studies, one year of psychology and three of English would contribute more to a knowledge of English than would the whole four years given to English alone. The time taken from history to give a clear conception of ethical life would return with increase all that history had suffered. The fact is that life is the major premise in all subjects of study. Yes, more; every study is a life process,—a form which life assumes in relation to its environment. Now if these fundamental concepts are not taken care of in a distinct line of study they must receive attention in the progress of other studies; and thus delay the movement in studies, while touching the fundamental ideas in a hesitating and doubtful way.

The reader who is interested in this subject should read Dr. Dewey's article in the January school review on "The Influence of The High School upon Educational Methods." Alcott's "Record of a School" contains many examples of the interest and skill with which children deal with psychological truths.

PRIMARY DEPARTMENT.

Edited by MRS. SARAH E. TARNEY-CAMPBELL, Supervisor of Instruction in the
Anderson Schools.

A PHONIC EXERCISE.

Occasionally we see phonics overdone but more often not done at all or not done well. Let it be said again that when a child can look at a new word and think immediately

the sound of this combination he is pretty well able to read for himself. And he cannot become an independent reader until he can do this.

The first step in teaching this difficult thing is to lead the children to distinguish between sounds; to have them see that all our familiar words can be broken into parts; to recognize these parts as making familiar words and recognizing familiar words when their parts are given closely together, and in the right order. It was to reach this first end that the teacher, sitting on a stool, called a class of tiny people who had only been in school a short time, and "played a game."

"Put your hand on a b-oy." Every little hand was put on the boy nearest, in the class.

"Touch your n-ō-s." Everyone did it but one. The teacher went over these sounds several times gradually bringing them closer and closer together till the child recognized the word.

"Put your hand on the d ōō-r." The tiny feet tripped over to the door. Then they were asked to touch the f-l-ōō r; a f-ōō-t; a t-ā-b-l; an ā-p-l; a s-l-ā-t, and m-ŷ f-ā-c. This seemed to be unusually difficult but it was gone over and over till every child's hand had found the teacher's face. This particular class has not yet separated a word and found the letters, the letters in no way have been mentioned. The only point in lesson was that the children might meet the first new thing in this work of phonics and be somewhat familiar with it before another should be taken. Each child was thoroughly interested and while the class was very orderly each tried to be first in touching the thing named.

SEAT WORK.

LIDA CLINE BROOKS, ANDERSON, IND.

Seat work is not given to prevent mischief or idleness; neither should it be something entirely distinct from, or disconnected from the class work, any more than one lesson should be entirely distinct from another. The thing to be sought is a harmonious blending of all the exercises, that

the work may be a connected whole, in which the children are constantly getting strength and developing power in one to aid in the next.

In giving seat work two things are to be considered. First, Will the work in itself develop the child? Second, Does it relate naturally to the work done in class? Quite frequently let the seat work be something that can be preserved and used; such as the making of boxes, baskets, envelopes, rulers, &c. The children will work more carefully, and get much better results, if they know the material they make is to be used by themselves, or by another class. Following are some of the seat occupations that may be given.

READING.—Outline the new word with seeds or lentils. Give each child a box of word cards and let him reproduce the stories read in class. Sometimes let the children paste these stories and take them home. Write the new words of the reading lesson, quite large, upon manilla paper and let the children perforate. They may perforate and sew the more difficult words.

Place upon the board a list of the words used in the reading lesson and let the children reproduce the list from their box of word cards. Write short sentences from the reading lesson. Draw the objects considered in the reading lesson. Let them draw their conception of the story read.

Suppose the new word is *basket*. Let the children mould a basket in clay, or cut and paste a basket from card-board or heavy manilla paper. If the new word is *doll* they may cut paper dolls. After the children know the letters, and begin to spell, they may reproduce the new words with letter cards. Let original sentences be made with word cards. Toward the close of the year original sentences may be made with letter cards.

NUMBER.—Let the children reproduce the combinations they have learned with sticks or pegs. Make drawings of objects illustrating the combinations. Cut circles, squares, and triangles of a given size and paste to illustrate the number work done in class. Let the children fold and cut paper squares or circles to show fractional parts. As often as convenient allow the children to do illustrative work on the board. They delight to work with chalk.

WRITING.—Outlining, perforating, and sewing may be given to supplement the writing. The supplementary work in writing should generally precede the class-work. Early in the year the children should be taught to write their names. The teacher writes the names on a slip of paper at least three inches wide. The children outline with seeds or lentils, then perforate and sew. Let each child keep his slip in his desk and practice writing his name at odd moments, when his other work is finished. For general seat work let the children make border and center patterns with seeds or tablets. At first the designs should be copied from the board. Afterward they may make original designs. Cut conventionalized leaves and flowers from heavy manilla paper. Let the children trace border patterns with these, and color with pencils or water colors. Encourage each child to keep a box at home, and whenever he has done anything well he may take it home and keep it in his box. These boxes may be brought to school on visiting days that the parents may examine the children's work.

A DEVICE IN SPELLING.

One of the difficult things with little people is to make them able to know when and where to use words that sound alike but are spelled differently and have different meanings, such as, pale and pail; hare and hair; seem and seam; pear and pair; etc. Below is given the result of a little device used by a second and third grade teacher to make forcible the use of such words as pair and pear, seem and seam and right and write. She had a lesson upon these words and then gave the children papers and asked them to write a little story containing each word and illustrate the story by pictures. The words *pear* and *pair* constitute one exercise and *seem* and *seam* another, and *write* and *right* another.

It is probably needless to add that the pictures are exact reproductions of the children's drawings; the copying paper was placed over their papers and the pictures were traced. The sentences are copied exactly as they were originally written with their little mistakes in spelling and punctuation.

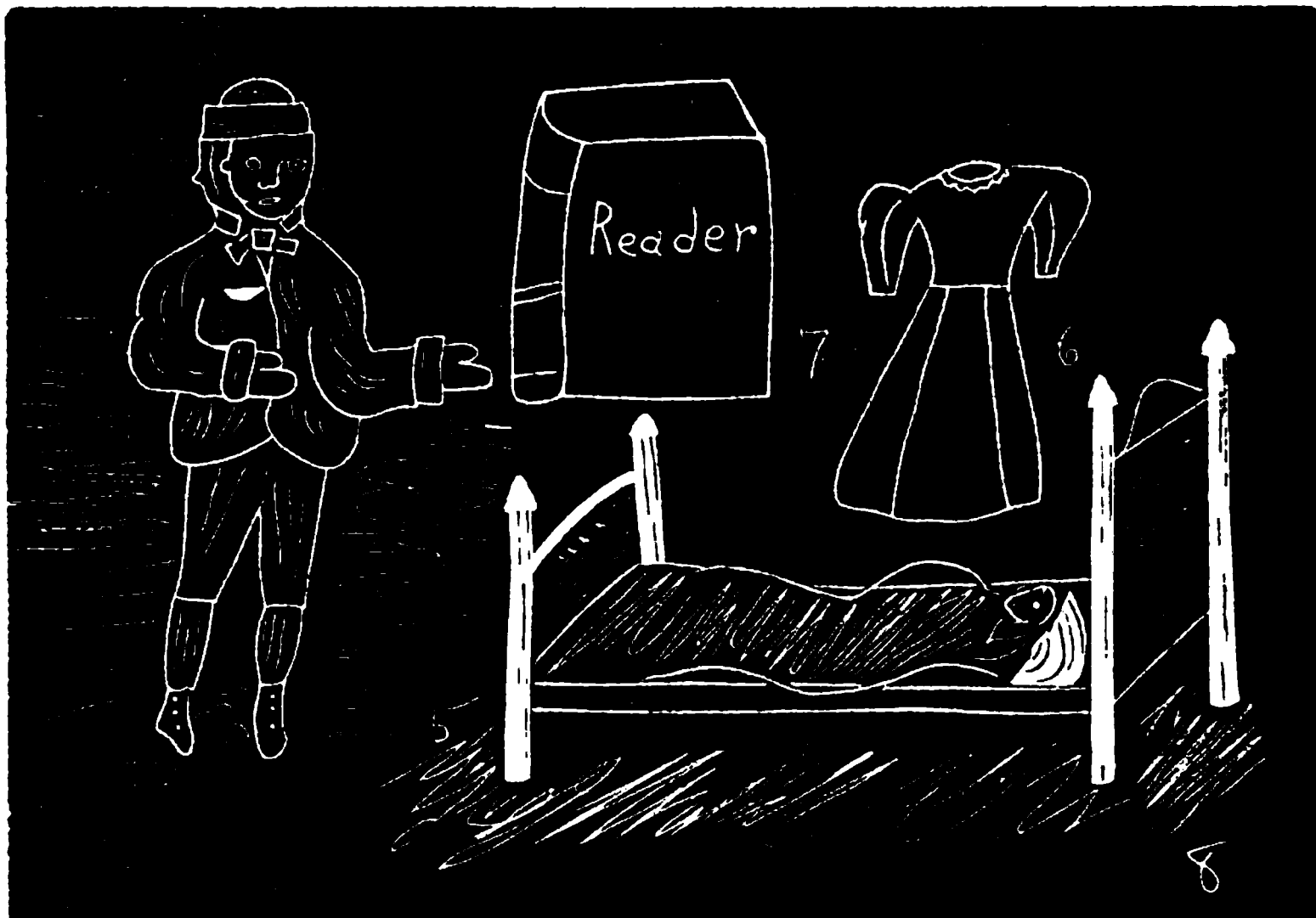
Every child wrote a sentence using each word and then drew a picture to illustrate it. So each had two stories and two pictures. Several stories are given but only enough pictures to show the idea of the drawing in their illustrations. The first pictures illustrates *pair* and *pear*, the second *seem* and *seam* and the third *right* and *write*.



The sentences using pear are necessarily very much alike. The following are a part of them: The pear grows on a tree. I have seen a pear on a tree. I had a large yellow pear last autumn. We gather pears in autumn, and can them; then we eat them in the winter. My grandma has a pear tree by the chicken-yard. The pear tree grew out in the field. I was in an orchard and there were five pear trees. My grandpa has some pear trees. Did you ever see a pear tree? I will take you upon the hill and show you one.

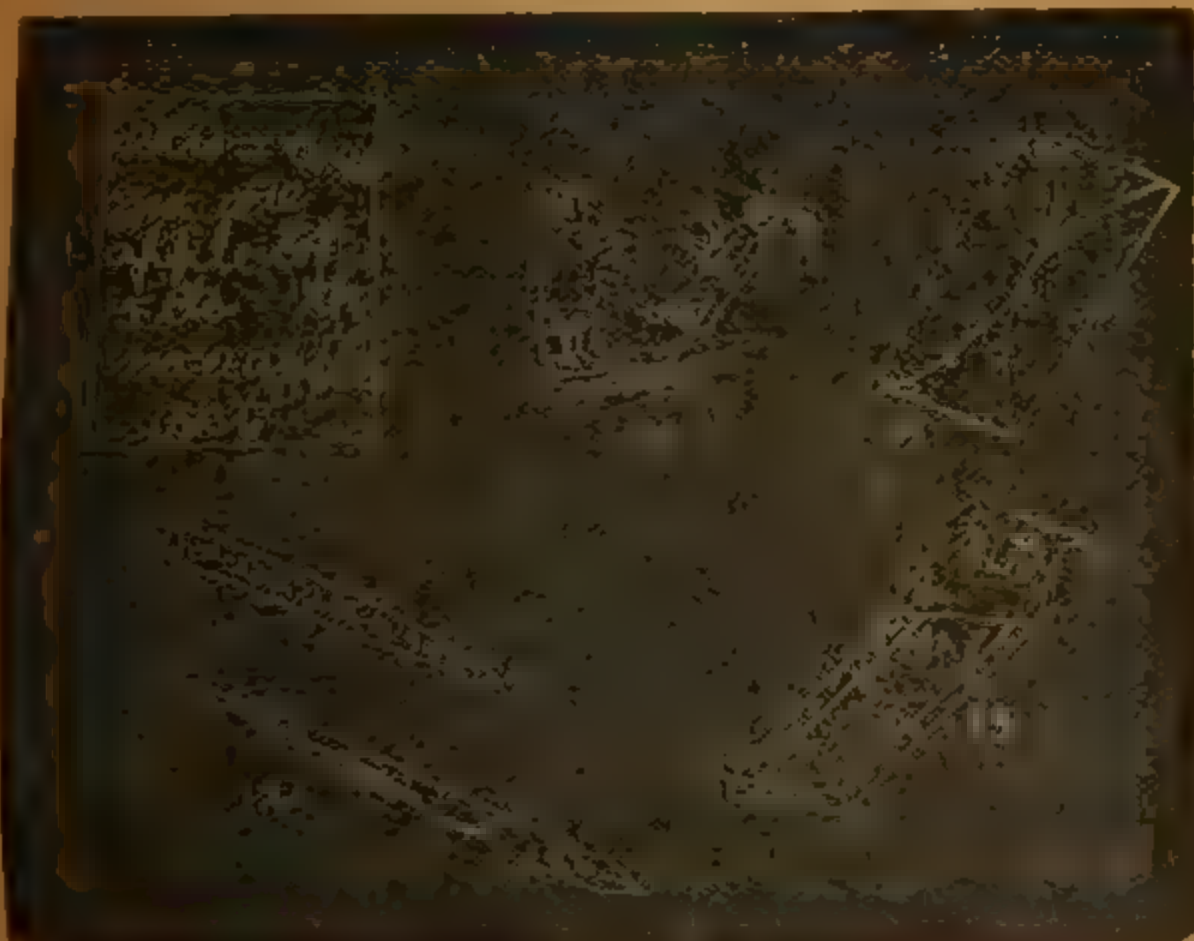
Sentences illustrating the word pair: I got two pairs of skates and they wouldn't fit. I have a pair of shoes. We have a pair of ducks. I have an old pair of ear-muffs at home. I have a pair of white rabbits. I had a pair of chickens. I went to the shoe store and bought a pair of shoes. I have a pair of mittens. I had a pair of stockings.

Sentences using seem: I seem to be very sick. (This belongs with the picture of the bed, No. 8.) I seem to know my lesson. (This belongs with the closed reader, No. 7.) I seem to see ten boys in this glass. I seem to see a boy talking. I seem to have the pictures of the chickens playing in our yard. The boys seem to have some fun. Miss — seems to say this room is noisy.



Sentences using seam: I have a seam in my shoe. I have a seam in my coat. (Three like this.) I have a seam in my pance. John has 7 seams in his coat. (This was given with picture No. 5.) I have a seam on my bants leg. I have a seam in my pants. My shoe has a seam. There is a seam in my coat. Did you ever have a dress without a seam in it? (This was given with picture, No. 6.) There is a seam in my coat sleeve.

Sentences using right: I got all my spelling right this morning. (This was illustrated by a closed book with the word "speller" on the back.) I saw a large boy hurting a little boy and I said, it is not right. I have a right edge on my desk. (Picture of desk.) Did the man bring you the right paper? Miss — said that problem is not right. (With picture, No. 9.) I fight with my right hand. (Picture No. 10.)



Sentences using write: I like to write in my new tablet. (No. 13.) I write with pen and ink. I write my lesson on slate or on paper. I write with a pen and pencil. (Picture No. 12.) I write with a pencil. I write letters to my grandma. (No. 11.)

THE SCHOOL ROOM.

HERBARTIAN CONTROVERSIES.

A. J. KINNAMAN, CENTRAL NORMAL, DANVILLE, IND.

Herbartianism is one of the four very live questions in education to-day. The other three are child-study, courses of study and city school management.

This doctrine has for its special tenets: (1) Moral aim in education; (2) A special relative-value estimate upon history, natural science and the "form studies;" (3) Many sidedness of interest, (4) Will, largely determined by knowing and feeling, (5) Concentration; (6) Apperception; (7) Greater prominence for the inductive method; and (8) the rejection of the "faculty" notion in psychology as a basis for instruction.

This system is attacked by its more or less organized philosophical opponent, the Hegelian and Kantian school.

(a) This school affirms that the Herbartians use "moral" in a too low and narrow sense, appealing, also, to mere conscience for guidance; that "ethical" meaning rational, moral and religious life, would represent a higher stroke at the truth. (W. W. Parsons). (S. S. Laurie puts the aim of education, "The ethical as including the prior moral life.") The Herbartians claim to use the word in the higher sense, however.

(b) They are declared to deny the freedom of the will. (Dr. William T. Harris at the Cleveland Convention, 1895.) The Herbartians, however, admit power of choice between conflicting ideas, (Geo. P. Brown, *Ill. Sch. Jour.*, May, 1895), but deny absolute "transcendentalism" of the will, and strike back thus:—"The will which is independent of experience except in capacity to control experience, cannot be educated. If we will, we will; if we won't, we won't; and that is the end of the whole matter." "Transcendental or absolute freedom of the will is accordingly inconsistent with the idea of moral education." (Herbart and the Herbartians, P. 42, Chas. De Garmo.)

(c) They are said to advocate a false and unnatural correlation of studies. (Report of the committee of fifteen, *Ed. Review*, Mar. 1895.) The Herbartians admit that some notions of correlation are false, and join in the denunciation, but stoutly claim a large element of valuable truth in the general idea. (J. M. Rice, *June Forum*, 1895, De Garmo in *Great Educator Series*.)

(d) It is urged that the whole system must fall since it is based upon a false fundamental philosophy and psychology. Herbart's theory of the manner in which we arrive at moral judgments may or may not satisfy the mind of the student; yet this is a matter of small consequence, for all ethical systems arrive at substantially the same rules of life, however varied the derivation of these principles may be. So says the great Herbartian disciple, De Garmo.

(e) To the criticism that their rejection of "faculties" is a step backward, they offer a denial.

(f) Mr. Clark, in a recent thesis declares they claim that

the "human ego or the soul, is the summation of conscious activities; or, in other words that the soul is evolved out of the sensations and other activities of consciousness." This accusation they unqualifiedly renounce as bordering Cotton Matherism. (*Ill. Sch. Jour.*, Oct., 1895, Col. F. W. Parker.)

In conclusion; we quote a statement from Geo. P. Brown:

"In fact, it is probably true that there is not a '*simon pure*' Herbartian in America; nor is there such a Hegelian. But there are those who emphasize unduly the mechanism that is involved in education; while there are others that emphasize unduly, if not unconsciously, the doctrines of transcendental freedom of the will."

The above is submitted as a suggestion to readers of *McMurry*. The following Bibliography may be helpful to those who wish to study the *controversy* more carefully.

First Year Book of the Herbart Society.—Chas. McMurry, Normal, Ill. 50 cts.

Herbartianism.—L. H. Jones, *Ind. Sch. Jour.*, Oct., 1895.

Herbart and the Herbartians.—De Garmo. Scribner Sons. \$1.00.

Herbart's Science of Education.—D. C. Heath.

Herbart's Psychology.—Appleton.

Herbart's Pedagogics.—Ossian H. Lang. Kellogg, 25 cts.

Lange's Apperception.—D. C. Heath.

Rooper's Apperception.—Kellogg.

Talks on Pedagogics.—Col. Parker. Kellogg.

Educational Review.—Henry Holt & Co., 35 cts. per copy.

Report of Committee of Fifteen. No. 43.

Concentration.—F. McMurry. No. 41.

Correlation of Science and History.—W. S. Jackman. No. 45.

Herbart and Pestalozzi. No. 25.

Froebel and Herbart. Oct., 1895.

Herbart's Doctrine of Interest. June, 1895.

Illinois School Journal, Bloomington, Ill.

Herbart, Hegel and the Will.—G. P. Brown. May, 1895.

The Old Psychology and the New.—W. T. Harris. June, 1895.

Transcendental Freedom.—G. P. Brown. Sept., 1895.

Transcendental Freedom of the Will.—W. T. Harris. Oct., 1895.

Concentration.—J. M. Rice. *Forum*, June, 1895.

ETHICS AND HISTORY.

WALTER N. VANSKOYOC, CRAWFORDSVILLE.

There is plenty of material in history to illustrate nearly all ethical laws, and the moral quality of every act in history should be discussed. A lesson on the effects of revenge may be given when studying about DeGourge in our United States history work. On benevolence when studying about Oglethorpe, physical liberty in connection with slavery, intellectual liberty in connection with the Sedition law or the first amendment to the constitution. The colonial history furnishes many opportunities for studying spiritual liberty.

A discussion of the subject of oaths will be in order when studying about the Quakers. We learn that the Puritans appointed days of prayer and there we can study that subject and also the observance of the Sabbath.

The law of reciprocity could be discussed in connection with the Mexican war. The rights of labor and property in connection with strikes, vote buying, the spoils system and dueling are excellent topics for ethical instruction. Ethical instruction may be given in each of the three phases of history viz: biography, the community and the nation.

ONE WOMAN'S WAY.

One of the most successful teachers whom I know took a very hard school, one in which severe punishments have been numerous in the past and suspensions frequent. Not a child has she touched, and not a suspension has occurred. Her success lies in herself, in her ingenuity. Of something out of the usual I will speak. Every Friday afternoon she steps to the board and writes a letter to the school, making comments on the week's work, notably on the conduct and spirit of the school. Every Monday morning there is another letter to greet them, speaking of what the week ought to be, and referring to any specially interesting subject that is to come up in the lessons of the week. She might say the same things and not have half the influence. She writes them more carefully, and they weigh more with the children and interest them more. One Monday morning she

wrote that the children who would like to "work off" their checks in deportment for the term might come to her desk at recess. This is the way she wrote one of the results:

"When recess came, and I saw the mass of faces around my desk, I felt that in an incautious moment I had summoned the army of the unemployed. I was not prepared for such a wholesale acceptance of my invitation. I began, however, in a business-like way, to inquire how many checks they wished to make up, etc. With as keen a sense of justice as I was capable of I laid out the work. To the boys I gave the task of cleaning up the yard, apportioning the work according to the number of checks; to the girls I gave the task of cleaning shelves and putting them to rights, and to one girl, who is particularly fond of little children, I assigned the duty of taking the children from the first and second grades whom she saw standing forlornly in the hall or on the school grounds, and *teaching them to play*.

"The opportunity to earn a good record and wipe out past mistakes delighted the children. To be sure, a few of those who most needed the chance did not avail themselves of it, but the sentiment of the school cannot fail to affect them.

"I am watching with interest the outcome. I cannot bear to give a child a check and leave him no way to work out his salvation. Doesn't that denial send people from bad to worse?"

There is a lesson in this woman's experience that many another may profit by.—*Albert E. Winship in The American Teacher.*

LEND A HAND.

(This department is conducted by MRS. E. E. OLCOCK.)

"Look up and not down
Look forward and not back
Look out and not in;
Lead a hand."

VISITING.

I. TO THOSE WHO VISIT.

Dear visitor, if you go to other schools, half hoping to find methods not quite so good as your own seem to you; if you come away saying, "*My class can do better than that;*" if you go to increase your self-satisfaction by noting flaws;

pray accept this *adaptation* of a terse bit of advice. "To those about to visit! Don't!!" Because the small amount of good that penetrates your armor will not counterbalance the depressing effect of your presence upon those whom you visit. You steal away the welcome of those who are actuated by a different spirit. But if you visit for inspiration; for the purpose of gathering new methods, or new applications of methods already familiar; if you visit because you long to teach a little better every year; we have this adapted quotation. "T'is well to mix betimes with clever teachers, one picks their brains unconsciously."

The appreciative visitor absorbs, as it were, something of the pervading spirit of the schoolrooms she visits. "I am a part of all that I have met," says a poet. In the same spirit, a thoughtful, progressive teacher may say, "My teaching is a part of all that I have seen."

The neat turn of a phrase, the clearcut plan of presenting certain subjects, the excellent arrangement of written work, were noted in this or that schoolroom and half unconsciously it may be, woven into the observer's own work. In one school, you noticed the general wide-awakeness of the pupils; their readiness for questions on all sides of a subject. Since then you have worked steadily for variety in recitation. Guarding against grooves in which the recitations run smoothly day after day, you have tried to fit the pupils to rely upon their own resources when unexpected questions come.

In another school, you were delighted with the pupils' charming manners. Their faces brightened as you entered, and any who may have been day-dreaming, went to work with a will. A visitor seemed as inspiring to them as an appreciative audience to an orator. They seemed to write and spell and solve problems just for you! Since then your school has been complimented upon that very point; and you know to whom you owe the inspiration. When asked by what magic you induced your pupils to appear at their best before company, you replied frankly, "For one thing, I appeal to love of approbation. I say to my pupils, Don't you like to have people think well of you? Aren't you pleased when they say you are intelligent, studious, industrious, and polite? Then *every day* let us try to deserve such an opinion,

and we shall be sure to give that impression to visitors. Any boy or girl would feel hurt and angry if a visitor should say, "You seem to be a lazy, mischievous boy who thinks it smart to be rude, and sneak out of lessons;" or "you appear to be an idle, sly, ill-bred girl." Yet visitors sometimes *think* those things, because pupils thoughtlessly act out that character in their presence. Let's make it our rule to act so that we need not blush if we could read our company's thoughts." And frequently, when a recitation or written work has been especially *good*, I say "I wish we had a visitor to hear or see this! Don't you?" Thus we become used to thinking of visitors, and wishing for them, and our welcome is genuine. I lead them to take pride in their work so they enjoy exhibiting it. You know "Pride is as often a virtue as a vice, and when it is a virtue it is a golden one."

Dear visitor, if, putting on sunny spectacles, that enable you to recognize improvements on your own methods, you go visiting, looking for "something better than you have known," you will find that a week spent in good schools, is worth six weeks' attendance at a good Normal school, so far as certain phases of school work are concerned. Visiting schools and normal school work supplement each other, fortunate the teachers who have the benefit of both.

II. TO THOSE WHO ARE VISITED.

Dear hosts and hostesses who receive callers in your school-homes, more needs to be said about plans to induce friends, patrons and fellow-teachers to visit your schools than to you about the benefits resulting. For you know that if your work is good, an interested visitor cheers you, and if dull routine has slipped into your school, a friend's presence spurs you to renewed efforts. Many of you have discovered that if your pupils do not do themselves justice before strangers, it shows that they need—more visitors. Nothing but practice will enable them to be at ease, free from self-consciousness, to think clearly and express themselves coherently before callers. It is as great an art to teach pupils to be self-assessed and acquit themselves creditably as it is to teach them to master a study. The keynote is that they feel the teacher's sustaining sympathy, feel that they have a staunch friend who will put their work in the best light.

"This class has just entered the grade" may be an explanation in a tone that encourages the pupils, because it implies that they do exceedingly good work in so short a time; or it may be an apologetic excuse in a tone that makes them shrink feeling that nothing is expected of *them*! Be chary of excuses, they may be worse than the defects! Every school has its chronic absentees, its hopelessly dull, its constitutionally careless, and its timid pupils whose voices are hardly audible. Do not let their shortcomings disconcert you. For your visitor will scarcely notice them unless he is seeking flaws; in that case he would find flaws if he had to fancy them in your best work. By the way, your management of the undesirable pupils referred to, may be to your visitor the most interesting and helpful part of your teaching.

A lesson in spelling and defining once progressed very creditably until it came the turn of an overgrown girl whom at a glance one would call stupid. Each pupil had been given several words. When the first was pronounced to her, she simply stared blankly and twisted her fingers. In an even, pleasant voice, the teacher pronounced a second and a third word without a syllable of response! The fourth word she attempted and missed! In the same calm, encouraging voice, without a comment, the teacher pronounced a word for the next pupil.

In his heart the visitor said: "Admirable! That failure was worth more than the perfect recitations. With what quiet courtesy the teacher ignored the failure of a stupid, panic-stricken pupil, and by his manner sustained the others. It explains the evident, affectionate respect of the pupils."

In another school, pupils were reciting gems of thought. Of two boys bearing the same Christian name, one could recite his gem exceedingly well, the other had not the ability to do himself justice. When, looking at the former, the teacher said, "Arthur," both boys arose. She might have said "Sit down, Arthur LeRoy, you can't recite yours well." But she *didn't*! She said kindly, "Arthur LeRoy, you may say yours after a while." She had not intended to have him recite, but because he supposed she had, rather than wound him, she called his name again. And *he did his best* and was happy. It was a fine bit of courtesy toward a pupil. In still

another school, the pupils were filing by showing their slate-work with pardonable complacency. One child looked up appealingly as he passed his teacher. In response, she took his slate, glanced at the unpresentable work, and handing it herself to the visitors said, "For some reasons, I call this the best slate in the class, because the boy has tried the hardest. He has lived where he couldn't attend school much, but he works like a beaver when he has a chance." She might have waited for him to present his slate himself and then excused it with "That's the worst looking slate in the class. But he *can't* do any better. He's a poor, country boy who hasn't had any chance." But would he have gone to his desk with that pleased look, feeling a desire to work like *two* beavers?

Teachers, if any of you feel tempted to ignore the finer feelings of the pupils, and speak such harsh truths as "Jessie can't learn to multiply." "Jimmy reads as though he had mush in his mouth." "Careless Carrie always drops her book." "Charlie is too slow to ever have his work finished in time." "Ray, take that chewing gum out of your mouth, are you hungry?"—you would do well to turn visitor and go to school rooms where you may observe the beauty and effectiveness of courtesy and loving kindness.

Since both the visitor and the visited help each other so much let us resolve that we will love our profession, will study, read, discuss and will *visit* each other for mutual benefit.

DESK-WORK.—SLICING GEMS, ETC.

An excellent device to assist in memorizing gems of thought is to slice them, or we might say "build" them, since it is on the same plan as sentence building. For pupils of suitable age it is ideal desk-work. Suppose the gem to be:

"The cowslip startles the meadow green,
The buttercup catches the sun in its chalice;
And there's never a leaf or a blade too mean,
To be some happy creature's palace."

Two copies should be made. One, written with wide spaces between the words, should be pasted upon thick vanilla paper and sliced into single words. The sliced with the unsliced copy should be placed in a box or envelope and

given to the pupil. Referring to the unsliced copy he "builds" the gem word by word from the sliced pieces, and studies it as he builds. Later he receives only the sliced copy and must "build" from memory.

The primary history class will enjoy putting together sliced answers to interesting questions as "What was President Taylor's nickname? "Taylor was called 'Old Rough and Ready.'"

The questions being on an unsliced slip, and the answer to be "built."

Geography questions and answers may be arranged in the same way.

For younger children, squares, triangles, circles, semi-circles, etc. may be drawn upon a slip of paper, the name of each being written within it; and the same forms cut from light weight cardboard. The pupil lays the forms upon his slate, draws around them and referring to the slip of paper copies the right name under each form. By and by, the slip may be withdrawn and the names written from memory under the outlined forms.

EDITORIAL.

At a congress of teachers held recently at Magdeburg, Germany, the fact came out that there are 13,000 teachers in Germany who receive less than \$200 a year (10 months). Could not some machinery be set in motion from "Yena" which would give the 13,000 less Herbartianism and more bread and butter?—*Western School Journal*.

THE school board of Chicago, by unanimous vote,—two not voting, three absent,—has accepted the Cook county normal school and the administration of Colonel F. W. Parker and his corps of instructors. Of course, this makes the adoption of the school certain, though the administration may be modified in September, if the board so elects; but there is no reason to suppose that it will be.

E. A. HOLDEN, chief clerk in the office of public instruction, at Lansing, Mich., recently spent two or three weeks in this state studying its school system. He spent some days in the state superintendent's office, and some time in visiting the country schools. Michigan is thinking of making some changes and wishes to get more facts in regard to some features of the Indiana system.

MAJOR J. B. MERWIN founded the "American Journal of Education" in 1867, and has edited it until within a few months—making a continuous service in that capacity of more than 28 years. He has

since accepted the editorial management of the "American School and College Journal," St. Louis. This makes Major Merwin the *veteran* educational editor of the country.

C. W. BARDEN established the School Bulletin at Syracuse, N. Y., in 1874, and has conducted it since, giving him a continuous service of *nearly two* years. The writer has edited this *Journal* since Aug. 1871.

"THE Proceedings and Papers of the N. E. A. for 1895" has reached us. The volume is somewhat fatter-looking than the rest, but has the same general appearance. The number of pages is 1,116. The book contains all the papers and discussions at the Denver meeting, full report of the Committee of Fifteen on Elementary Schools; the discussions at the Cleveland meeting, Department of Superintendence; also the papers read on the opening days of the Educational Congress at the Atlanta exposition. There is also a complete list of members. Every teacher and every school library should send for this volume, the most valuable yet issued. Price \$2. Address Z. Richards, 1301 Corcoran street, Washington, D. C.

THE year 1896 opened full of large excitements. January opened with the Armenian massacre question before all the world and the Venezuelan matter hot between the United States and England, with all civilization discussing it. In Cuba the crisis of the revolution was at its height. Italy was having her own troubles in Abyssinia. Like a thunderclap came the Jameson invasion of Transvaal and Jameson's defeat and the congratulatory message of the German Emperor to Paul Kruger, the Dutch president. All Europe forgot the Venezuelan question in the far nearer and more pressing possibility of a war which might at length involve every nation in Europe. In the United States meantime the \$100,000,000 issue of government bonds superseded for the moment the Venezuelan question, all this before the year was a week old.

HORACE MANN CENTENNIAL.

HORACE MANN was born May 4, 1796, so this is the centennial anniversary year of his birth. Every school in the country should celebrate the anniversary day.

Horace Mann is the apostle of public school education in this country. His work was chiefly done in Massachusetts and Ohio, but its influence is world wide. His motto was "Universal Education of the people in public schools *free for all*." There never were any *public schools free for all* till he secured them. He referred to teachers as the *region of Honor*," and counted their work the noblest entrusted to the hands of man. When faithfully and efficiently done he called it, *"operation with God in the elevation of the human race."*

Antioch College, Yellow Springs, Ohio, of which he was the first president, and where he did his last work, is making extensive preparations to celebrate this anniversary. The celebration will not take place May 4, however, but at the college commencement, in June. It is expected that a large number of his old students will be present. The writer hopes to be one of this number.

SCHOOL ENUMERATION.

State Superintendent Geeting is putting forth every exertion possible to have the school enumeration exact and reliable. As it has not yet been taken under the present law much explanation is needed. In a recent letter sent to county superintendents, he calls attention to several points which may not be clear. He advises that the trustee file with the superintendent the "original copy" of the enumeration, but says that a "certified" copy will answer. He further says that "the trustee should begin the work this year as though no transfers had ever been made," and make a complete record. "This should be repeated each year." An honest, correct enumeration is a consummation devoutly to be wished.

THE VENEZUELAN QUESTION.

This question which is now so prominently before the country is one that teachers should know something about. The question is really a double one. (1) It is a question as to the boundary line between British Guiana and Venezuela. (2) It is a question between the United States and Great Britain.

The boundary line contention is an old one. In 1803 the British gained control of that part of Guiana controlled by the Dutch and this transfer was confirmed in 1814. In 1819 the Republic of Columbia of which Venezuela formed a part gained its independence from Spain. In 1831 Venezuela separated and became independent. The British claim all that originally belonged to the Dutch and Venezuela claims all that originally belonged to Spain. Just where the original line was is not known—probably was never definitely settled. In 1842 the British employed Sir Robert Schomburghk, one of its own subjects to survey this boundary line. Schomburghk made his final report, but the Venezuelans made such a vigorous protest against it that Lord Aberdeen, who then represented Great Britain, abandoned it. The Venezuelans have at all times offered to arbitrate the matter, but England has never consented.

In recent years immensely rich gold mines have been discovered on the Venezuelan side of the old Schomburghk line and English subjects have become largely interested in them and so England now claims a tract of territory west of this line almost equal in size to the State of Indiana. England has recently agreed to arbitrate its claim west of the Schomburghk line if Venezuela will abandon its claim to all territory east of it. This Venezuela refuses to do, but wishes the whole question arbitrated.

At this point the United States came in and said to England you must not acquire territory on this continent by *force*; and justifies its action on the principles involved in the "Monroe Doctrine."

President Monroe said in one of his messages to Congress that no European power should be allowed to extend its territory and form of government on this continent. This "doctrine" has been heartily

approved by the sentiment of this country but has never been formally accepted by any foreign country as international law.

England denies the right of this country to interfere, but the United States has virtually said in answer you *must* compromise. Congress has recently passed an act authorizing the president to appoint a commission whose duty it is to determine what the true boundary line is and the commission has been appointed. The indications now are that England will either settle the matter with Venezuela or submit the whole matter to arbitration.

Venezuela usually occupies but little space on the maps we see, but it comprises more territory than is comprised in France, Holland and Germany combined, while its population is not quite equal to the population of Indiana.

BOOKS FOR TEACHER'S READING CIRCLE.

The books selected for the Teachers' Reading Circle for the year '96-'97 are "Guzot's History of Civilization" and a book made up of "Self Reliant" (Emerson), "The Great Stone Face" (Hawthorne), "Vision of Sir Launfal" (Lowell), and "The Holy Grail."

The New York School Journal in its issue of February 1, criticises this selection of books and among other things says of the Reading Circle Board:—"No, they have not done well; it is a wonder such capable men and women as are on this committee could not have done something more practical" The writer of the article makes a plea for the "practical" and insists that teachers need professional instruction rather than literary culture.

The trouble with the writer is that he does not know what he is talking about. He does not know that the second book is pedagogical. He does not know that one of the most competent men in the entire country (Arnold Tompkins) has been employed to edit it and to make an analysis of each selection. He does not know that such a discussion will bring in to use all pedagogical principles applicable to advanced reading. He does not know that such a study of these selections is the best possible preparation for the teaching of all literature and all advanced reading. Furthermore, he does not know that the Reading Circle Board and the committee on "Course of Study for Township Institutes" always work together, and that the township work always supplements and reinforces the Reading Circle work.

By referring to the township institute outlines during the past four years it will be seen that they have had method in reading, in language, in geography, in number, in history, etc. The plan has been very satisfactory. This has done more for the schools of the state than any other agency, unless it be attendance at our professional schools. The Board was so well satisfied with the results that it was thought advisable to have a book prepared for the Teachers' Course for the coming year, embodying psychology, or Method Applied in Reading. Our selections were made which emphasize a certain principle; these

selections are to be edited in such a way that the teachers of the state can get the most out of them in the township institute, and in their studies in their libraries; and later on can apply these methods in the teaching of reading in their schools. The second book in the course for the coming year—*Method Applied in Reading*—will be one of the most popular and most profitable books ever used in the Circle.

As above stated, the author of the editorial in the *New York School Journal* has no conception of the work in Indiana; or, at best, he has no knowledge of the work for the coming year, so far as the second book is concerned.

It has been the policy of the Board since its organization, to follow two general lines of work. These are a general cultural line and a professional line. Psychology and Mental Science were studied for the first few years, and, later on, beginning with De Garmo, applied psychology or method was studied.

The aim in the future will be to apply the principles of method and psychology as they have been applied in the past in others of the common branches.

BOERS AND BRITISH.

In 1652 the Dutch established a colony at the cape of Good Hope. It went on flourishing for nearly a century, then the naval power of Holland declined and she left her colonists to look after themselves. A strange people grew up at Cape Colony, Africo-Dutchmen—white, to be sure, like their ancestors, but half savage so far as their treatment of the black natives went, obstinate, like all Dutchmen, but desperate sticklers for their rights, fighters as well. They made slaves of the native negro tribes, notably the Kaffirs, and regarded this bondage as the cornerstone of their civilization, a divine institution, in fact. They were farmers. They got rich and at the same time were a people to themselves, separate from the rest of the world.

Cape Colony was taken possession of by the British in 1814. The British were determined to stop the negro slavery among the Boers in their new territory. The Boers would not submit to this and "trekked" off to Natal, a new region where they would have all the slaves they liked and worship in their own way.

Ever encroaching, the British got possession of Natal. Once more the Boers declined to submit to British rule; once more they trekked northward. They took possession of the Orange country, which in like manner was proclaimed British territory. The Boers fought for their lands desperately. Many of them went across the Vaal river, "Transvaal," and made a new start in life. Finally, after much fighting and negotiation, two Boer republics were created and their independence formally recognized by the British in 1854. They are respectively the Orange Free State and the Transvaal.

In the Transvaal is the Witwatersrand, the great gold district. When the gold-fields were discovered, the first of them shortly after

England had acknowledged the independence of the Boer republics, there was naturally a tremendous rush of Englishmen into the Transvaal. When immensely rich gold mines are found anywhere on this footstool, England is going to take possession of them or know the reason why not. There is no shadow of doubt that the Jameson invasion of the Transvaal republic meant the final annexation to Great Britain of the vast gold district. This the Boers knew and were prepared to meet the emergency. How Paul Kruger, president of Transvaal, met it like a man all the world knows and is glad of it besides, at least outside of Great Britain. It is true that the taxes imposed on foreigners in the Transvaal, the refusal to allow them citizenship under almost impossible conditions were most vexations, unjust even, but what would you have? The granting of full citizens' rights to foreigners, particularly to Englishmen, meant that the republic would in six months' time be entirely swamped with Englishmen and the Boers would be obliged to submit finally to the hated British rule, even in their own republic. It was life or death to the Boers, and they took the measures they deemed best to save themselves and their government. Who shall blame them? Hardly the English.

By treaties made between Great Britain and the Boer republics in 1881 and 1884, England assumed a partial sovereignty over the republics. She agreed to protect them from foreign invasion, and in return she was to have control of their foreign political relations, diplomatic arrangements, etc. But Great Britain has undoubtedly lost all right to claim the enforcement of these treaties, because of the outrage of the Jameson expedition. Englishmen themselves were thus the first to violate the agreement, and it cannot therefore be longer binding on the Boers. Decidedly the British protectorate over the Transvaal and Orange Free State is off.—Ex.

QUESTIONS AND ANSWERS.

STATE BOARD QUESTIONS USED IN JANUARY.

SPECIAL NOTICE.—Questions will be prepared on the books below, as follows:

HENRY VIII.—McMURRY'S GENERAL METHOD.

February, 1896. History, Introduction, etc., and Acts II and III, and Chapter III, General Method.

March, 1896. History, Introduction, etc., and Acts IV and V, and Chapters III, IV and V, General Method.

April, 1896. History, Introduction and all of the acts, and Chapter V, General Method.

The questions on "The Tempest," for the six months beginning with the May examination, have been prepared with the view of saving the teacher use the book in answering the same.

GRAMMAR.—1. Compare and contrast the conjunction and connective adverb.

2. What is case? What grounds are there for saying English nouns have two cases; three cases; four or more?

3. Analyze, We are not certain that an open sea surrounds the pole.

4. "An adjective is a word used to describe or define a noun," therefore, in sentences 1, 2, 3 and 4 below, the italicized words are adjectives, and the italicized word in 5 is not an adjective:

1. *My* book is torn.
2. The *sailor's* daughter is beautiful.
3. James, the *farmer*, is sick.
4. The man *killed* by the train was young.
5. Who pities *poor* me.

Criticise the above.

5. Define the appositive, the possessive, the participle and the adjective.

6. Classify the ideas expressed by the words in the following sentences:

- (a) The people watched them in silence.
- (b) New York is a large city.
- (c) The children read an hour.
- (d) The running stream murmurs sweetly. (Any five.)

HENRY VIII.—1. Who is Cardinal Campeius, and what is his mission in England?

2. Why does Cardinal Wolsey seek to bring about a separation of Henry and Catherine?

3. Why does Wolsey wish to bring about an alliance of Henry VIII and Francis I?

4. Who was the duchess of Alencon?

5. On what ground ostensibly does Henry wish a divorce?

6. Does the drama justify us in saying that the reasons stated by Henry for wishing a divorce are false? Explain your answer.

7. What is the relation of Charles V of Germany to Catherine?

8. When Catherine appears in court and makes her appeal to Henry and the cardinals what characteristics does she show?

9. What is her attitude toward Wolsey on the occasion referred to in question eight?

10. Does Henry exonerate Wolsey from all responsibility for the divorce proceedings? Justify your answer. (Any five.)

GEOGRAPHY.—1. Why should Physical Geography be studied after Mathematical and before Political Geography?

2. What is the true standpoint from which to study geography scientifically?

3. A traveler, from a high point inland, sees a large body of water receiving many streams, but apparently without outlet; what kind of a lake may he expect to find it? Why?

4. Why is the day, in mid-summer, longer in the far north than at the equator?

5. How has the accurate scientific study of geography affected the commerce of the world?

6. What are the true causes of the ocean currents?
7. What is the smallest but the most important grand division of the world? What geographical conditions have led to that importance?
8. A vessel lands at New York whose entire cargo of sugar, coffee, hides and diamonds were taken in one port; from what country did it probably sail?
9. Where is "Yellowstone Park?" What natural conditions led to its being made a national park? (Any seven.)

SCIENCE OF EDUCATION.—1. How is the subject matter of *history* in the Herbartian sense fitted to lead the child to form correct moral judgments?

2. How is the subject matter of *history* fitted to excite the desire for correct moral activity?
3. What does Herbart mean by a moral *revelation of the world*?
4. "Examples of moral action drawn from life are the only thing that can give meaning to moral precepts." Explain how this affords a key to moral teaching, especially with children.
5. How are the *natural sciences* fitted to give the child a moral revelation of the world, and thus induce him to become a moral being?
6. What are the real ends of science study?
7. What is meant by the *scientific spirit*? (Any five.)

READING.—1. What in your estimation should constitute the difference in the teaching and in the reading ability of third and fourth reader pupils?

2. In the preparation of their reading lessons, what, if any, assistance would you expect fourth reader pupils to derive from their use of the dictionary?
3. The successful use of the dictionary by the novice argues what previous instructions in phonics and in the use of diacritical marks?
4. Mark the vowels, the c's, the s's, the g's, the silent letters, and the accented syllables in the following words: class, adieu, gauge, fatigue, asked, alternate, misery, victuals, mamma, often.
5. Name a suitably graded book for pupils of this grade the reading of which will tend to strengthen their spirit of patriotism; another whose effect will be to make them more humane; a third whose avowed purpose is to give information.

HISTORY.—1. What is the American Railway Union? The American Federation of Labor? The Knights of Labor? Upon what ideas are these orders founded and what are their purpose?

2. Describe the circumstances attending the first election of Jefferson.
3. Give a sketch of Thomas H. Benton.
4. What can you say as to the state of Literature and Art in the American Colonies before the Revolution? What authors were generally read?
5. Why did not the admission of Indiana to the Union provoke a bitter discussion of slavery like the admission of Missouri? (Any three.)

SCIENTIFIC TEMPERANCE.—1. Name five qualities by which you can tell alcohol.

2. What effect has alcohol upon the pepsin of the gastric juice? What does this indicate as to its use in indigestion?

3. It was at one time thought that alcohol would prove to be the Elixir Vitae; how does modern science class it?

4. From what part of grains and fruits is alcohol made? Why does not the use of these things in the natural state produce the same evil effects as that of alcohol?

5. Alcohol largely checks oxidation in the tissues? How and when does this prove injurious?

6. How can you account for the tendency of alcohol, when constantly used, to blunt the moral sense and incite to crime?

7. What are the evil effects of alcohol upon the ear and upon the hearing? How produced?

8. What are the evil effects of tobacco upon the muscular system?

9. How do you account for the peculiar drivelling at the mouth so often seen in those constantly using tobacco?

10. How can you account for the fact that the opium habit is harder to eradicate than the alcoholic. *(Any five.)*

PHYSIOLOGY.—1. What are the evil effects on persons occupying ill-ventilated rooms?

2. Make diagrammatic sketches of the various epithelial structures.

3. What are the advantages and disadvantages of the structure of the spinal column.

4. Sketch the appearance of a long bone in longitudinal and in cross sections. What is the function of the various parts?

5. What is the structure and function of the stomach?

6. Where are the centers of the reflex actions?

7. Describe the different sorts of nerve fibers and state where each is principally found.

8. What are the auditory ossicles and what is their function?

9. Describe the brain. *(Any five.)*

ARITHMETIC.—1. Give your first steps in teaching numbers. Illustrate by a series of questions.

2. What steps are necessary to obtain a loan from a bank? Write a note that would be acceptable as to its form to a bank for a sum of money payable in 90 days.

3. John Dix bought of James Orr $\frac{1}{4}$ of a bushel of potatoes, at 90 cents a bushel; a bale of hay, of 160 lbs., at \$16 a ton; a halter, 15 cents; 418 lbs. of coal at \$7.50 a ton. He gave 120 strawberry plants, at \$12 per thousand, as part payment. Make out in proper form an itemized statement of this account.

4. Give five underlying principles of subtraction.

5. Treat the number eight fully.

6. "A denominate number is a number whose unit (object) is named." Point out the defects in the above definition.

7. Write in words the following as per cents: $.93\frac{1}{4}\%$; $.93\frac{1}{4}$; $93\frac{1}{4}\%$; $932\frac{1}{2}$ and $9.32\frac{1}{2}\%$.

8. What will be the value of a load of studding of 24 pieces, 16 feet long, 3 by 6 inches, at $2\frac{1}{4}$ cents a foot, board measure? *(Any seven.)*

ANSWERS TO PRECEDING QUESTIONS.

HENRY VIII. 1. Campeius was a cardinal in the Catholic Church, and was sent by the Pope of Rome to England to assist Wolsey in trying the divorce case between Henry and Catherine.

2. Cardinal Wolsey seeks to bring about a separation of Henry and Catherine in order that he may bring about the marriage between Henry VIII of England and the sister of Francis I of France.

3. Wolsey wishes to bring about this alliance because he thinks that if it were accomplished, Francis I would aid Wolsey in securing the Papal Chair.

4. She was the French king's sister.

5. Ostensibly to undo a wrong and thus dispel his remorse, or remove all grounds for conscientious scruples.

6. No, the drama does not justify us in saying that the reasons stated by Henry for wishing a divorce are false. It is with him, as he says, a matter of conscience. We must not, however, understand Henry to mean by conscience anything more than the desire to do whatever would bring desirable consequences to himself and avoid whatever would bring undesirable consequences to himself. He was captivated by the beauty of Anne, but at the same time was superstitious and feared the illegality of his marriage with Catherine.

7. Charles V of Spain was Catherine's nephew.

8. Here Catherine shows herself to be, first of all, a loving and faithful wife. She is gentle and refined, yet manifests unusual shrewdness in detecting the conspiracy against her. She shows great power of persuasion; but when once she finds that persuasion will not avail, she becomes as firm as she was gentle, and with great courage openly denounces the man who had sought her ruin.

9. She stands as the enemy of Wolsey and knows him to be here. She says to him,

"I do believe
You are mine enemy; and make my challenge
You shall not be my judge; for it is you
Have blown this coal betwixt my Lord and me;
Which God's dew quench. Therefore I say again,
I utterly abhor, yea, from my soul
Refuse you for my judge; whom, yet once more,
I hold my most malicious foe, and think not
At all a friend to truth."

10. Yes, Henry completely exonerates Wolsey from all responsibility for the divorce proceedings. He says to Wolsey,

"My Lord Cardinal,
I do excuse you; yea, upon mine honor,
I free you from't."

"You're excused:
But will you be more justified? you ever
Have wish'd the sleeping of this business; never
Desired it to be stirr'd; but oft have hinder'd, oft,
The passages made toward it:—on my honor,
I speak my good Lord Cardinal to this point,
And thus far clear him "

GRAMMAR.—1. Both serve to unite clauses. Some conjunctions unite clauses of the same rank; other conjunctions unite clauses of different ranks. The true conjunctive adverb unites clauses of different ranks and serves as a modifier. This function as a modifier does not belong to the conjunction. Some conjunctions unite words or phrases of the same rank; this function does not belong to the true conjunctive adverb.

2. Case is the relation which a substantive sustains to some other word. The argument sometimes given for only two cases is that there is only one change of form from the nominative, i. e., the possessive, the idea of case being based upon *form*. The argument for three cases is based upon relation—the nominative or naming case including what is commonly known as the independent case; when this so called independent case is regarded as a distinct case then the number is four.

3. The sentence is complex; the subordinate clause modifies the adjective "certain," to which it is joined by the conjunction "that."

4. An adjective does not describe a noun, but it assumes or asserts an attribute belonging to the object named or represented by the noun. An adjective does not define a noun; it limits the meaning of a noun or a pronoun. In first, "My" limits the meaning of "book;" in second, "sailor's" limits the meaning of "daughter;" in third, "farmer" expresses an attribute belonging to the person whose name is James. In fourth, "killed" expresses a condition, brought about by an action. In fifth, "poor" expresses a condition of the person indicated by the pronoun "me."

5. The *appositive* is a substantive used to emphasize or explain the meaning of another substantive, by repetition, or by expressing an attribute. The *possessive* is a noun or a pronoun used to limit the meaning of another noun or pronoun by denoting possession. The *participle* is one of the forms of the conjugation of its verb, and partakes of its nature and of the nature of either an adjective or a noun. The *adjective* is a word used to express a quality, or an attribute, belonging to an object; or to limit the meaning of a noun or a pronoun.

6. Adjective ideas:—The, a, large, an, running. Adverbial ideas:—in silence, an hour, sweetly. Substantive ideas:—them, New York, city, people, silence, children, hour, stream. Predicative ideas:—watched, is, read, murmurs.

GEOGRAPHY.—1. The phenomena of mathematical geography determine the chief features of physical geography; and these features greatly influence the development of the different phases of political geography. Therefore a scientific treatise, in which the subjects occurred in the order of development, would present mathematical geography first, physical geography second, and political geography third. But this order is not in accord with the fundamental principles of pedagogy, one of which is that the nature of the subject and the degree of difficulty should correspond with the age and strength of the mind.

2. The answer to this question depends upon what the proposer meant by "scientifically." If he meant *logically*, then the studying should be done from the standpoint of cause and effect, and in this order. If he meant *effectively*, then the studying should be done with this central idea always in view, that geography is the study of the earth as the home of man, as the theatre of thought and action.

3. A salt lake, on account of the constant evaporation leaving the salty sediment behind.

4. Because there the diurnal arc is greater than a semicircle, the constant size at the equator.

5. By discovering the water-ways, the river valleys, and the ocean routes that make the safest and best highways for travel and transportation; by discovering and developing the resources of different parts of the world. These influences have scattered people whose civilizations have advanced and whose diverse wants have thereby so multiplied that commerce is ever busy supplying them.

6. See text-book, page 35.

7. (a) Europe. (b) Fertile soil, favorable climate, abundant resources of all kinds, facilities for trade and navigation, and the energy of its people.

8. From Rio Janeiro.

9. Chiefly in north-west Wyoming. The natural conditions that led to its being made a national park were its "rugged mountains, deep canons, rushing streams, waterfalls, hot springs, geysers, etc.

SCIENCE OF EDUCATION.—1. The child himself in his immature conscience possesses crude ideas to be modified, unified, strengthened, and developed into a power able to form correct moral judgments. This evolutionary growth is directed and nurtured by the study of what prominent actors in the world's history have done or left undone. And if the historian does not come too near to the present and keeps back in those periods where actions and deeds of men have had their effects and borne their fruits, his judgment is not apt to be wrong. Historians very generally agree as to where praise or blame should lie. The child in reading history constantly has his own power of judgment sharpened by noting how the deeds of prominent actors have been passed upon by mankind in general.

2. As the pupil reads about those who were noted for dignity, patriotism, and high moral character, and notes the great regard with which they were held by their countrymen, he will have an instructive desire to so live as to also be worthy of praise and esteem. This desire will become very deeply rooted as he notes the unanimous verdict of condemnation by all mankind upon those characters in history whose lives were marked by dishonesty, avarice, tyranny, or any ignoble action or career.

3. To have revealed to him in the study of the different lines in nature such ideas of design, fitness, beauty, etc., of things that his mind will be filled with profound regard for the Maker of them all.

4. The key to moral teaching with children is the influence of a

moral life that is being enacted daily in their presence, and that is full of the "milk of human kindness." In teaching moral lessons, let there be some impressive incident (one that they have witnessed if possible) used for illustration. To absorb moral action, they must see it, and feel it thrill.

5. They are fitted to do so, because in them are revealed the wonderful laws of nature and the divine wisdom of God.

6. To secure a moral revelation of the world; to be so inspired by it as to grow into a moral being; to know nature.

7. The *scientific spirit* is the product of *inspiration* and *desire*—the *inspiration* that has sprung from a glimpse of the wonders and beauties that lie hidden in Nature's mysteries, and the *desire* that has been born of the soul thirsting for knowledge.

READING.—1. Fundamentally, the teaching and the nature of the work assigned should be the same. The Fourth Reader pupils can plow a little deeper into the thought work, and their power of oral expression should be as much greater as an additional year's age would naturally make it.

2. They should use the dictionary for finding the meanings and pronunciations of all the difficult words.

3. Sufficient to enable them to give the sound that is represented by each diacritical mark wherever it is found.

4. Eggleston's Primary History, Black Beauty.

HISTORY.—1. The American Railway Union was a union organized in 1893 by the employe's unions of western and northwestern railroads. The president is Eugene V Debs of Chicago. The American Federation of Labor was organized at Columbus, Ohio, in Dec. 1886. About eighty national labor organizations composed of about 7000 local unions with an aggregate membership of over 650,000 affiliate under the above title and usually act together, although reserving the right to independent action. The present president is John McBride, Columbus, Ohio. The Knights of Labor is a national labor organization having a membership of about 200,000 laboring men. These organizations are founded upon the ideas, (a) that it may be necessary to resist some other organization or power that threatens their interests; (b) that in union there is strength, (c) and that only through organization can effective results be achieved.

2. Certain measures of congress, notably the Alien and Sedition Laws, and an independent action of Adams, in which he did not consult his cabinet, alienated many of the Federal party, so that the Republican (democratic) were given much strength, the state of New York even going their way. A caucus of Federals, called by the Philadelphia "Aurora," a Jacobinical conclave, is alleged to have strengthened the cause of Adams. A caucus of Republicans was held to nominate Jefferson and for the purpose of unification as to party and as to a vice-president. An unsuccessful attempt was made by congress to remedy the deficiencies in the Constitution in the matter of the electoral count, by a law. The contest during the election was

bitter. The old quarrel between Adams and Hamilton was renewed, and the latter tried to plan for the defeat of Adams and the election of Pinckney, but the scheme failed and he succeeded only in defeating his party.

3. Thomas Hart Benton was born in North Carolina, and educated at Chapel Hill College. He came west and began the practice of law at Nashville, Tenn., but soon went to St. Louis, Mo., as the editor of the *Missouri Argus*. In 1820 he was elected United States senator and served till the session of 1851, at which time he failed of re-election. Immediately after he appeared in the Senate, he took a prominent part in the deliberations of that body and soon rose to eminence and distinction. He was one of the chief props and supporters of the administrations of Jackson and VanBuren. Colonel Benton was distinguished for his learning, iron will, practical mind, and strong memory. The nickname of "Old Bullion" was given to him, by reason of his advocacy,—during the discussion as to re-chartering the United States Bank,—of the adoption of gold and silver as the currency of the country. After leaving public life, he devoted himself to the preparation of an abridgement of the debates of Congress, upon which he labored until his death, which occurred in Washington, April 10, 1858.

4. Very little of importance had been accomplished in either art or literature before the Revolution. In painting, Benjamin West had achieved some fame and had assisted and encouraged Peale, Stuart, Wright, and Trumbull in the same line. In literature, as in art, the exigencies attendant upon the development of the New World prevented inspiration and advancement. The nature of much that was written was prozy, commonplace, or argumentative; some writings were practical, pithy, and patriotic. The chief writers of that period were Jonathan Edwards, Benjamin Franklin, Thomas Paine, James Otis, Josiah Quincy, and Samuel Adams. It was natural that the chief writers—men of the learned professions, busied in affairs, and already feeling that instinct of government which animates territorial government—should be publicists, setting forth the principles of order, economy, and social weal.

5. Because the Ordinance of 1787 provided that in the Northwest Territory "neither slavery nor involuntary servitude shall exist, except as a punishment for crime." Indiana formed a part of this territory. When Missouri applied for admission there was no such ordinance setting forth at once what should be the status of slavery within her borders. The territory had been peopled chiefly by planters from the slave states, who believed that they had a right to frame their own organic laws, and who regarded the objections raised against the introduction of slavery into that state as an interference in their domestic affairs.

PHYSIOLOGY.—1. In ill-ventilated rooms, the various impurities, besides taking the place of the oxygen, irritate the air-passages and lungs, or poison the blood directly by being absorbed by the organs of

respiration. The health of the tissue through which it passes is lowered, and all the vital processes are depressed.

3. (a) Cushions of elastic cartilage are between the vertebrae to diminish the shock of jars and falls. (b) The column has four curves so nicely adjusted that their relative positions are ordinarily maintained whatever the movements of the body may be; hence pressure is better distributed than would be the case if the column were straight. (c) The size of the vertebrae increases from the top of the column downward, to compensate for the increase of weight to be supported. (d) The bony processes permit the firm attachment of the muscles. (e) Its firm structure protects the spinal cord.

4. The *ends* are enlarged in order to secure a strong, firm joint and plenty of surface for the attachment of muscles; they are covered with cartilage to aid in motion by its smoothness and elasticity. The *marrow* aids in making the bones compact and strong; it giving nutrition to the bones; and in renewing bone-substance. The *periosteum* serves as a basis for the bone-substance and is the chief agent in renewing it after a loss in consequence of some injury. The *mineral* matter gives rigidity and strength to the bones. The *animal* matter gives toughness and elasticity to the bones.

5. See Adv. Phys. pages 141, 142, 143.

6. In the brain, the medulla, the spinal cord, and the ganglia.

7. The *white or tubular nerve-fibres* consisting of an outer, thin, transparent, limiting layer of connective tissue enclosing a layer of transparent fluid fat. This latter is the *white substance of Schwann*. Within this is a darker, firmer, denser, albuminoid core, called the *central band axis*; it is the important part of the fibre. This kind of fibre composes the white parts of the brain and spinal cord, and the chief substance of the nerves. The *gray or Remak's nerve-fibres* are pale, soft, granular and somewhat flat in appearance. They have no distinct investing structures. They contain no dark nuclei. These fibres are abundant in the nerves of the sympathetic system.

8. Pages 281 and 282 adv. text-book.

9. See pages 222 to 225 inclusive.

SCIENTIFIC TEMPERANCE.—1. Odor, taste, combustibility, boiling point, density.

2. The alcohol precipitates the pepsin. Alcohol can not possibly aid in curing indigestion; all it does is to paralyze the nerves so as to lessen the distress.

3. Modern science classifies it as the "foundation of death."

4. (a) From the starch of grains and the sugar of fruits. The starch is converted into grape sugar, from which is produced the alcohol. (b) Because in fermentation these things are converted by a chemical change into entirely different substances, which, of course, possess entirely different properties.

5. This proves injurious by the alcohol taking a portion of the oxygen which ought to be applied for the natural heating of the body.

It has its most baneful effects when the body is being subjected to cold for some considerable time.

6. No other organ of the body is so quickly and so seriously injured by alcohol as the brain, for small as it is, it receives almost one-fifth of the blood, and its tissue is extremely delicate and contains quite an amount of water. The rapidity of nervous action induced by alcohol is rebuked by negation of result. Continuous use produces unbalanced judgment, faltering memory, blunted sensibilities,—all tending to produce moral derangement and deaden the reasoning power; it also exalts and excites the animal, organic centers.

7. As much of the blood goes to the brain, all the centers of that organ are narcotized, or deadened by alcohol. The ear failing to receive perfect messages from the nerve centers, to the same extent this organ fails in performing the work that nature assigned to it.

8. Excessive use of tobacco causes a trembling and relaxing of the muscles, and partial paralysis.

9. See answer to 8.

10. Because in its first effects, it brings ecstatic dreamy visions in which the subject fancies himself very happy; therefore the victim is led on by this delusive enchantment. In its later effects the anguish is indescribable and can be relieved at once only by the use of more opium. This play upon the nerves soon becomes a frightful necessity.

ARITHMETIC.—1. The underlying idea is to present the group, find out how many constitute it, and then separate it into smaller groups in as many different ways as possible. Each step must be noted carefully, recited understandingly, and illustrated concretely.

2. One important step is to get some one who is financially responsible to agree to go your security. For the form of the note see the arithmetic, or the printed form at any bank.

3. INDIANAPOLIS, IND., FEB. 17, 1896.

JOHN DIX,

Bought of James Orr,

$\frac{1}{4}$ bu. potatoes @ 90 cents per bu.....	\$0.67 $\frac{1}{2}$
160 lbs. hay @ \$16 per ton.....	1.28
1 halter .....	.15
418 lbs lbs. coal @ \$7.50	1.56 $\frac{1}{4}$..\$3.67 $\frac{1}{4}$
By credit,	
120 strawberry plants @ \$12 per M.....	\$1.44

To balance \$2 23 $\frac{1}{4}$

4. (a) The minuend and subtrahend must be of the same kind. (b) The difference is the same in kind as the minuend and subtrahend. (c) The difference equals the minuend minus the subtrahend. (d) The minuend equals the difference plus the subtrahend. (e) The subtrahend equals the minuend minus the difference.

5. See answer to (1). Illustrate all the different processes.

6. Not every number whose unit is named is a denominate number; for it is constructed according to a varying scale of denomination.

7. Ninety-three and one-fourth hundredths per cent. Ninety-three and one-fourth hundredths. Ninety-three and one-fourth per cent. Nine units and thirty-two and one-half hundredths. Nine units and thirty-two and one-half hundredths per cent.

8. Answer, \$12.96.

FOOD FOR THOUGHT.

[Send all communications to W. F. L. Sanders, Connersville, Ind. They should be received by Mar. 18. Be prompt. Write only on one side of your paper.]

SOLUTIONS RECEIVED.

PROBLEM 112. I have a triangular piece of silk worth \$1.20; the sides are 3 feet, 4 feet, and $4\frac{1}{2}$ feet; what is the value of the largest circular piece that can be cut from it? (A. E. McFARLIDGE, Holton.)

SOLUTION.—

$$\text{Area of triangle} = \frac{1}{2} \times 3 \times 4 = 6 \text{ (sq. ft.)}$$

$$\text{Radius of circle} = \frac{6}{\frac{1}{2}(3+4+4\frac{1}{2})} = 1.02+$$

$$\text{Area of circle} = (1.02)^2 \times 3.1416 = 3.28.$$

$$5.88 : 1.20 :: 3.28 : x = .669+; \text{ans.}, \$.669+$$

(BY J. STOMMEL, Hanover Center.)

PROBLEM 113. How far from the end of a stick of timber 30 feet long must a handspike be placed so that three men—two at the handspike and one at the other end of the stick—may each carry one-third of the load? (J. M. FARBER, Brushy Prairie.)

SOLUTION.—

A C D B

The point of application of the resultant of all the forces acting downward is at the center C. Let the point at which the two men lift be at D, while the one man lifts at A. Then in order that the beam may be carried on a level, we have (force of one man) times AC = (force of two men) times CD or, $15 = 2CD$; $CD = 7\frac{1}{2}$; therefore the two will lift at a point $7\frac{1}{2}$ feet from the end, or from the center.

(BY W. A. HAMILTON, Zanesville.)

PROBLEM 114. Prove that the angle formed by the bisector and the perpendicular drawn from the same angle of any triangle is one-half the difference between the other two angles.

(DANIEL HAYDEN, Morocco.)

SOLUTION.—Let AB be the base and C the vertex; let D be the foot of the perpendicular and E the foot of the bisector.

$$\text{Then } DCE + ECB + CBD = DCA + DAC.$$

Adding DCE to each side, we have—

$$2DCE + ECB + CBD = DCA + DAC + DCE$$

$$\text{But, } ECB = DCA + DCE$$

$$\text{Hence, } 2DCE + CBD = DAC$$

$$2DCE - DAC = CBD$$

$$DCE = \frac{1}{2}(DAC - CBD) \dots Q. E. D.$$

(BY ADARINE CHAPMAN AND FANNIE TROXELL, Larwill.)

PROBLEM 115. By selling \$1000 of 3 per cent. at 95 and re-investing it, I increase my income \$10 a year. If the dividend on the new shares is 8 per cent., what is the price of them?

SOLUTION.—3% of \$1000 = \$30; \$30 + \$10 = \$40, the new income, arising from an 8% dividend; 1% = \$5; 100% = \$500, or 5 shares. These cost \$950 (10 shares at 95); if 5 shares cost \$950, one share cost \$190.

(WALTER B. CURTIS, Aurora.)

PROBLEM 116. A train increases its average rate of speed throughout one mile 10 per cent. every minute; in 4 minutes it travels 1547 yards: how far did it travel in each of the four minutes?

SOLUTION.—Let 100% = distance in first min.; then 110%, 121% and 133.1% will represent respectively the distances for the second, third and fourth minutes. Adding, we have 464.1% = 1547 yds.; 1% = $3\frac{1}{3}$ yds.; 100% = $333\frac{1}{3}$ yds.; 110% = $366\frac{2}{3}$ yds.; 121% = $403\frac{1}{3}$ yds.; 133.1% = $443\frac{2}{3}$ yds.

(BY GEO. BRINGLE, Foresman.)

SOLUTIONS REQUESTED.

(From the *Indiana Complete Arithmetic*.)

PAGE 322, Ex. 24. If 5 times a certain number less 20, is three times the number, then 20 represents two times the number; if two times the number equals 20, once the number equals 10.

Ex. 26. If he had $\frac{1}{4}$ of his money left, he spent $\frac{3}{4}$ m.; the question says that he spent $\frac{1}{2}$ m. and 9 cents. Hence $\frac{1}{2}$ m. and 9 cents equals $\frac{1}{4}$ m.; therefore, 9 cents represents $\frac{1}{4}$ of his money; then his money, or $\frac{1}{4}$ m. equals 36 cents.

Ex. 27. The difference between 5 times the number and 3 times the number is 2 times the number. Also, by the terms of the question, if 5 times the number be *lowered* 10 units, and if 3 times the number be *raised* 4 units, the results are equal; hence, 5 times the number and 3 times the number are just 14 units apart. Therefore 2 times the number equals 14, or the number equals 7.

Ex. 31. John's money equals 3 times Frank's money;

Frank's money equals 1 time Frank's money;

Hence, the difference between John's money and Frank's money is two times Frank's money; but the difference is also 30 cents; therefore, two times Frank's money equals 30 cents; or, Frank's money equals 15 cents, and John's money equals 3 times 15 cents, or 45 cents.

PAGE 328, Ex. 19 $9\frac{3}{4} + 2\frac{3}{8} = 3\frac{3}{4}$; adding the numbers, we have $3 + 2 + 10 + 3 = 18$; adding the fractions, we have

$$\frac{1}{2} + \frac{5}{8} + \frac{7}{10} + \frac{3}{8} + \frac{3}{4} = 2\frac{33}{80}; 18 + 2\frac{33}{80} = 20\frac{33}{80} = 20.695.$$

[The answer in the book has a comma where there should be a decimal point.]

PAGE 338, Ex. 133. By the conditions, A's share is $\frac{2}{3}$ B's; B's $\frac{5}{8}$ of C's; and C's $\frac{7}{9}$ of D's. For every dollar D gets, C receives $\$7$; B receives $\frac{5}{8} \times \$7 = \$3\frac{5}{8}$, and A receives $\frac{2}{3} \times \$3\frac{5}{8} = \$1\frac{17}{24}$; $\$1 + \$7 + \$3\frac{5}{8} + \$1\frac{17}{24} = \$3\frac{23}{24}$

therefore, each will receive his respective sum as many times as the number of times $\$3\frac{1}{3}$ is contained in \$121, which is $38\frac{1}{3}$ times; multiplying \$1, $\$1\frac{1}{2}$, $\$2\frac{1}{3}$, $\$4\frac{2}{3}$ by $38\frac{1}{3}$ we get respectively \$38 $\frac{1}{3}$, \$33 $\frac{1}{3}$, \$28, \$21, (See Journal of July 1895, page 429).

PAGE 327, Ex. 7. A's playing : B's playing :: 9: 6; or as 3 : 2; or as 48 : 32.

A's playing : C's playing :: 16:9;..... or as 48 : 27

Therefore, B's : C's :: 32:27; that is C' would win 27 out of 59; or 54 out of 118. (See Journal of March '95, page 171).

QUERIES.

30. $\frac{3}{4}$ of the cost of a buggy was \$40, which was $\frac{4}{5}$ of the cost of the horse. What did the horse cost? What is the antecedent of "which?"
(———, Graham, Ind.)

Answer. The antecedent of "which" is \$40. It was not intended to be so by the proposer of the question, and next time he should be more careful in the construction of his sentences. As stated, the answer is \$70, and the " $\frac{3}{4}$ " has nothing to do with the solution.

31. Who was the author of the following, and to what does it have reference?

"The conscious water saw its God and blushed."

(SUBSCRIBER, Willow, Ind.)

32. Who are the persons that constitute the Venezuelan Commission?
(W. A. MILLER, Atlanta, Ind.)

33. Who are our present state officers, and what is the compensation of each? (Id.)

34. In the Indiana complete arithmetic, is the answer to example 27, page 257 correct? Is not the brokerage to be counted on the par value?
(JAMES M. FOLEY, Newpoint.)

35. How much land did Congress grant LaFayette, and where was it located?
(ELLA BROWN, LaFayette, Ind.)

Answer 22-23. The Confederate Congress which met at Montgomery Ala., Feb. 4, 1861 appointed a committee consisting of one delegate from each of the seven seceding states to report upon a device for a national flag for the Confederacy. The committee made an elaborate report in which they recommended a flag that had a certain resemblance to the one they were deserting. It consisted of three bars of red and white,—the upper, red—the middle, white—the lower, red,—the lower bar extending the whole width of the flag. Just above it next to the staff in the upper left hand corner of the flag should be a blue union with seven stars in a circle. In selecting this device, or emblem, the committee acted upon the prevailing sentiment of the Congress that only such changes should be made as might be necessary to easily distinguish it from that of the United States. During the course of the debate on this subject a delegate, Walter Brooks of Miss., said, "The flag of stars and stripes is the idol of the heart,

around which cluster memories of the past which time cannot efface or cause to grow dim." This flag was first displayed in public over the state house at Montgomery, March 4, 1861, the day Lincoln was inaugurated President.

[W. H. CHILLSON, Co. Supt. of Schools, Clay Co., Ind.]

CREDITS —114, Adarine Chapman, Larwill; Fannie Troxell, Larwill; Mark Moffett, Terre Haute; E. E. Vance, Hagerstown . . 115, L. E. Rady, Edwardsville; William Hedrick, Ford; J. B. Royce, Terre Haute....116, Everett Beadles, Velpen; D. V. Gay, Orland; A. E. McFatrige, Holton . . .113, 114, W. A. Hamilton, Zanesville; Otto Clayton, Fowler....112, 114, D. F. Adams, DePauw....115, 116, Walter N. Vanscoyoc, Crawfordsville; R. C. Dykins, Lexington; Thomas M. Watts, Winchester; I S. Morse, Crumstown; W. F. Headley, Bloomington; Ollie Willoughby, Marble Corner; J. S. Slabaugh, Plevna; N. H. Thompson, Convenience....112, 114, 116, J. Stommel, Hanover Center; 113, 115, 116, Walter B. Curtis, Aurora; 114, 115, 116, E. M. VanBuskirk, Monroeville; 112, 114, 115, 116, J. J. Mitchell, Frankfort112, 113, 114, 115, 116, Ed. Wade Montgomery....112, 114, 116, J. A. Aubry, Headlee,....114, 115, 116, Geo. A. Ostheimer, Connersville.

PROBLEMS.

117. If three circles intersect each other, their common chords are concurrent lines. (E. M. VANBUSKIRK, Monroeville, Ind.)

118. A and B killed a deer, and wishing to weigh it they placed a pole across a fence and put the deer on one end of the pole and A got on the other end, and it just balanced. The deer was then changed to the other end of the pole and B got on the opposite end, and again it just balanced. What did the deer weigh if A's weight was 150 lbs. and B's weight 190 lbs.? (A. E. MCFATRIDGE, Holton, Ind.)

119. A circular field contains 10 acres. How long is the rope, one end of which is fastened to a stake on the circumference, that permits a horse to graze on one acre inside of the field?

(M S. WOODS, Poseyville, Ind.)

120. A man derives an income of \$760 from money invested in 3 per cent. Consols; he sells out when they are at 93 and buys $3\frac{1}{2}$ per cent. at 95; how much is his income increased by the transfer?

[We thank the contributors for their prompt and hearty responses. Much matter is left over till next month.]

MISCELLANY.

PRELIMINARY PROGRAM OF THE NORTHERN INDIANA TEACHER'S ASSOCIATION.

APR. 2. THURSDAY.—Visiting Marion Public Schools.

THURSDAY EVENING (7:30 o'clock).—

Opening exercises. Address of welcome. Response.

Address of Retiring President.

H. G. Woody, Superintendent of Schools, Kokomo.

Inaugural Address.

Calvin Moon, Superintendent of Schools, South Bend.
Miscellaneous Business.

APR. 3. FRIDAY MORNING (9 o'clock).—

1. Qualifications and Characteristics of a Good Teacher.
2. The Recitation and Topical Teaching.
3. Teaching Manners and Morals.

Discussion to be led by A. W. Edson, Agent State
Board of Education, Massachusetts.

Miscellaneous Business.

FRIDAY AFTERNOON (1:30 o'clock).—

Meetings of Art, Music, High School, Grade, and Country
and Village School Sections.

FRIDAY EVENING (7:30 o'clock).—

Address—The Ideal Teacher.—Col. Francis W. Parker.

APR. 4. SATURDAY MORNING (9 o'clock).—Conference on Concentration, led by Chas. A. McMurry, Normal, Ill. Printed syllabi will be prepared and distributed and an opportunity given for discussion.

The High School, Grade, Art, Music, and Country and Village School Sections all have good programs.

The music will be under the direction of the local committee and the officers of the Music Section.

For all information in regard to accommodations, etc., address Supt. W. D. Weaver, Marion.

The usual one-and-one-third rate on the certificate plan will be given by the railroads. The Big Four, Pan Handle and Clover Leaf Railroads run through Marion, and persons will be at all trains on Thursday to meet visiting teachers.

EDWARD AYERS, Lafayette,
Chairman Executive Com.

TREASURER'S REPORT OF STATE ASSOCIATION.

Balance on hand, Jan. 1, 1895	\$127 86
Received from members, Dec. 26 28, 96.	265 50
Received from Dr. Butler's lecture.	21 50
Received from Grand Hotel	150 00

EXPENDITURES:—

By cash to P. P. Stultz, Assist. Sec.,	Voucher 1	\$ 3 50
" " J. H. Hayworth, Mem. Ex. Com.,	" 2	4 80
" " W. S. Almond, Mem. Ex. Com.,	" 3	6 00
" " Helen Sanxay, Rec. Sec.,	" 4	16 00
" " J. R. Hart for printing,	" 5	14 25
" " Dr. Butler for lecture,	" 6	95 00
" " W. E. M. Brown for music,	" 7	5 10
" " Howard Sandison, Com. expenses,	" 8	5 00
" " Grand Hotel, Dr. Butler's expenses,	" 9	1 50
" " J. F. Haines, Assist. Sec.,	" 10	6 00
" " J. A. Carnegie, Exp. as Ch. Ex. Com.,	" 11	93 50
" " J. R. Hart, postage, exchange, telegrams, labor, services as R. R. Sec.,	" 12	61 62
" " Special agent Cen. Traffic Asso.,	" 13	17 00
By Balance on hands		235 59

\$564 86 \$564 86

Number of members enrolled 450.

Respectfully submitted,

JAMES R. HART,
Permanent Secretary and Treasurer.

COUNTY SUPERINTENDENTS' MEETING.

A district meeting of county superintendents was held at Connersville, Feb. 6. The meeting was not large but the interest was excellent and those present felt greatly profited.

Supt. Greenstreet, of Henry County, discussed, "Closer Supervision." He advocated district supervisors, who should have the care of two or three townships. County superintendents with their present duties cannot give the schools the close inspection they need. The superintendent's most important work is *visiting* schools, and yet his other duties make it impossible to see each school more than once or twice. These supervisors could do this important work and greatly assist teachers, and then report to the county superintendent. It was unanimously decided that there should be an educational qualification for county superintendents. "The schools are what the county superintendent is."

"Is a surplus of teachers necessary or desirable," was answered unanimously in the negative.

Supt. Senour, of Franklin County, discussed, "Best methods to pursue in visiting schools. He said that visiting schools and township institute work are the most important duties of the Supt. He examines slates and tablets of pupils to see whether he can discover the purpose of the assignment of the subject matter in the lesson. The teacher who simply gives to the class a mass of facts with no central point or development from the thought side is not teaching to any advantage. The recitation is the vital place in the school work. There the minds of teacher and pupil unite. There must be some definite point to every lesson, and it must be a step beyond and higher than former apperceived ideas. He had no respect for a teacher who depended on the inspiration of the moment for devices or plans. The work must be thoroughly organized, the plan of recitation developed and the devices prepared before the recitation. Two don'ts: Don't make speeches and don't hear recitations. For the first, not necessary to say why, the other, Superintendent does not know the plan of steps of former lessons, does not have devices at hand. The aim is always to keep the pupils and teachers striving for something higher—a little higher than they can reach until they grow. It was decided to hold the next meeting at Brookville. Supt. Senour acted as chairman and Supt. Glidewell as secretary.

BORDEN INSTITUTE will open its spring term March 24.

THE new state of Utah gives full suffrage rights to women.

HOPE NORMAL reports progress. It has started a three-column, four-page quarterly.

THE announcement that Dr. Nansen has been to the North Pole, and is on his way back, has not yet been fully confirmed.

F. E. ANDREWS and A. E. Knowles will conduct a Normal at New Washington beginning April 7 and continuing 11 weeks.

NOTICE.—Any one wishing a bound volume of the School Journal for '91 or '92 or '93 will please communicate with this office.

MANCHESTER COLLEGE, located at North Manchester, has started out well. The enrollment now reaches 238 students. This certainly is doing well.

ANTIOCH COLLEGE, of Horace Mann fame, recently had a streak of good fortune. F. A. Palmer, a wealthy New York banker, has endowed a chair of "Christian Ethics."

THE Northern Indiana Normal School, at Valparaiso, is still "booming." Booming is always the word to apply to this phenomenal school. All questions answered by the principal, H. B. Brown.

THE supreme court of New York has recently sustained a law which forbids the licensing of a saloon located within 200 feet of a school house or church. It is estimated that the decision will close 2,000 saloons in the state.

A REQUEST —Take a postal card and divide it into two spaces. On one write "Boys," on the other write "Girls," then write the ages in *years and months* of each pupil in your school; thus, 12-3, meaning 12 years and three months. Mail to A. H. Yoder, 599, 65th St., Chicago.

WM. M. CROAN, formerly superintendent of Madison County and late principal of a normal school at Shenendoah, Iowa, has returned to his old home, and is arranging to open a normal next September at Anderson. He is making plans and hopes to begin with a large school.

ORTHINGTON has the largest enrollment in its history, and its schools are moving smoothly. It will graduate a class of ten from its high school, four of whom will go to the state university and two expect to attend the state normal. Supt. W. D. Kerlin is a man with high ideals which he impresses.

FAIRMOUNT.—The Friend's Academy at this place was burned Feb. 20. It was a new building which cost about \$10,000 and the loss is complete, with no insurance. A library of about 2,000 volumes was saved, but a society library of 600 volumes was lost. It is announced that the institute will be rebuilt.

THE Western Drawing Teachers' Association will hold its third annual meeting April 30, May 1, 2, in Indianapolis. A varied and interesting program has been prepared and a large attendance is expected. For program and all needed information address the secretary E. N. Reser, LaFayette, Ind.

MICHIGAN CITY.—In January, the big school building, containing the high school and nine grades, was burned. It was valued at \$40,000. Quarters were readily found and so the schools only lost one day's work. The building was well insured. Plans for a new building with all modern conveniences for teaching science, etc. have been adopted. Elmer E. Slick is principal of the high school, and Edward Boyle is superintendent of schools.

THE BOONE COUNTY midwinter association has closed a two days' session, and we have all received new inspiration for our work. Dr. Charles A. McMurry, of Normal, Ill. and Prof. M. W. Sampson of Indiana University, lectured on their respective subjects, concentration and English. More than two hundred teachers were in attendance and all felt that they had been at the feet of two masters.

THE National Educational Association will meet at Buffalo, *sure*. It was thought for a time that the place of meeting would be changed because the railroads would not extend the time for which tickets would be good. That is now settled and tickets will be good returning till Sept. 1. The single fare for the round trip is also conceded. Pres. N. C. Dougherty has labored hard to secure these terms.

THE Southern Indiana Teachers' Association will meet at Washington, April 9 and 10. Howard Sandison, D. M. Geeting, T. A. Mott and other prominent educators will be on the program. The different sections will be represented. The program is nearly completed. Write to the chairman of the executive committee, W. F. Axtell, at Washington, for it. Mr. Axtell insures a hearty welcome to all who attend.

THE Indianapolis High School has been specially honored. Michigan University recently sent a member of its faculty, Prof. Demmon, to Indianapolis on purpose to visit the high school. After spending two days and making a thorough inspection of the work, he went back and made a very favorable report. Pres. Angell of the University has written Prof. Hufford, principal of the high school that hereafter students from the high school will be admitted to the University on Prof. Hufford's certificate, *without examination*. Good.

THE Carter bill now before Congress has for its purpose the introduction of military instruction and drill into the public schools of the country. The Journal's advice is DON'T. The great purpose of the schools is to make citizens, not soldiers, and to cultivate a spirit of peace, not of war. The tendency of civilization to-day is in the direction of humanitarian means for settling differences between nations. Instead of training the "future citizens" in the art of warfare, we should teach them the doctrine of arbitration. Patriotism means good citizenship, and good citizens will make good soldiers, should the occasion ever arise.

HURRAH FOR INDIANA.—Just as we go to press we learn that the National Superintendents' Meeting has decided to hold its next meeting at Indianapolis. Gilbert, of Minneapolis, was elected president. The Jacksonville meeting is reported a good one considering its location. Indiana had a larger delegation than any state except Florida. The following named persons represented it: D. K. Goss, D. M. Geeting, and Miss Nebraska Cropsey, of Indianapolis; A. E. Humke, Vincennes; Frank L. Jones, Tipton; W. R. J. Stratford, Peru; J. A. Carnagey, Columbus; Edward Ayres, LaFayette; F. T. Fitzgibbon, Elwood; Jas. F. Scull, Rochester; Jos. Swain and wife, Bloomington. Many thanks to the delegation.

GREEN CO.—The teachers have just bought a county library consisting of over 200 volumes. The books have been selected with care and discrimination. The most of the money used in the purchase was surplusage from county institutes. The library will be divided into three parts, one of which will be placed at Bloomfield, another at Worthington, and the third at Linton, thus bringing them within easy reach of the teachers. The books will be changed each year so that all teachers will have the use of all the books. Of course the teachers expect to add to this library from year to year. W. D. Kerlin, superintendent of the Worthington school, was chairman of the committee to select the books, and did the purchasing.

No county in the state is making more effort to advance educational interests than Green. Every teacher in the county is taking the reading circle work, and almost every school in the county is doing work in the Y. P. R. C. Supt. J. L. Cravens says that teachers must *move up or move out*.

SHELBYVILLE.—On Feb. 6, Shelbyville dedicated a new high school building. Pres. Swain, of Indiana University, made the principal address. His subject was "Our Public School System." Several neighboring school superintendents were present and some of them made short addresses. Supt. J. H. Tomlin was master of ceremonies. The building dedicated, with its furnishing, cost about \$30,000. It is two stories high, of pressed brick, and stone and terra cotta trimmings. It contains eight rooms, arranged with every convenience known to modern architecture. It is fitted in every department with all the accessories necessary for a complete study of the sciences. There has been nothing omitted that would be of benefit to the pupils and the teachers.

In addition to this building, a ward building has been completed during the past month that cost \$10,000. During the past ten months Shelbyville has expended \$40,000 for two new school buildings.

ANDERSON.—The writer recently spent a day in the Anderson schools. As these schools have a larger per cent. of "graduates" among the teachers than any others in the state, and as they have a "supervisor of instruction," in addition to a superintendent, much was expected of them. All the rooms in three buildings were visited and the character of work carefully noted. In several of the primary rooms the children were making *valentines*. (Feb. 14.) These were of artistic design, decorated with drawings in different colors, all done by the children themselves. These were to be given away, and the teacher made sure that each child should get at least one. In one room they were getting ready to have a Lincoln Day, and the children were learning the important incidents in the life of the great American.

In another room the children were having a lesson on the flag—its history, its colors, the number of stars at different times, and why, &c, &c.

In one room a stuffed mink formed the basis of a language lesson.

The children observed for themselves and then were called upon to state facts. These statements were their own expressions, and of course were the best possible material for primary reading. In another room a little girl brought her pet rabbit to be observed, and talked about, and then written about.

The number lessons in the lower grades were made concrete and illustrated. The music was particularly good from bottom to top—no screeching. In the upper grades the work was, as a rule, well presented. Especially good lessons were heard in grammar and geography.

The schools are not equally good but they rank much above the average. The general spirit is good and the ideals are high. The best standards are placed before the teachers and they are cheerfully working toward them.

Anderson is especially favored in having the services of Mrs. Sarah E. Tarney Campbell as supervisor of instruction. For this special work Mrs. Campbell has no superior in the state. She knows what ought to be done, and she is fertile in resources by which to reach desired ends.

Supt. J. W. Carr knows how to select teachers and knows how to get good work. Only good words of him and his schools were heard.

PERSONAL.

A. E. MORGAN holds the reins at Poneto.

E. E. McROBERTS has charge of the schools of *Union*.

JOHN COOPER is still giving eminent satisfaction to the people of Brightwood.

FRANK DUNCAN has recently taken charge of a ward building at Greensburg.

J. C. GREGG continues to superintend the Brazil schools with general satisfaction.

JOSEPH SWAIN, of the State University, was down for a discussion at Jacksonville.

W. E. SIMMONS directs the schools of Liberty Centre in a good four room building.

MISS EMMA BUCHANAN, a popular teacher at Edinburg, has accepted a position in the Lafayette schools.

MISS JENNIE SMALL, class '94, Indiana State Normal, is supervisor of instruction in the Elwood schools.

W. P. BURRIS, superintendent at Bluffton, was on the program for the discussion of a paper at Jacksonville.

O. H. BOWMAN is serving his third year as principal of the Mentone schools and will be retained for the coming year.

J. C. BLACK, formerly of this state, is now at work in St. Louis. He is a good man and Indiana should induce him to return

MISS LENA FOSTER, for many years principal of the North Vernon high school, has been promoted to the superintendency *vice* Horace Ellis resigned.

R. I. HAMILTON, superintendent of the Huntington schools, has been chosen a trustee of the State University to take the place of E. E. Griffith, resigned.

HORACE ELLIS resigned the superintendency at North Vernon in order to complete his course in Indiana University, where he expects to graduate in June.

W. E. LUGENBEEL, formerly principal of the Southern Indiana Normal at Mitchell, but for several years past president of Austin College at Effingham, Ill., is willing to make engagements to do institute work in this state next summer.

J. L. DIXON, late superintendent of the Elizabethtown schools, is now one of the corp of instructors of the Hope normal school. He made a good record for thorough work at his former place and will doubtless do as well in the normal.

R. H. HOLBROOK, for so many years connected with National Normal school at Lebanon, O., has accepted a professorship in the state Normal school located at Clarion, Penn. He will be missed in Ohio and Indiana by a host of acquaintances and friends.

E. A. BRYAN, formerly of this state, now president of Washington Agricultural College, at Pullman, recently made an address at the dedication of the new Administration Building, which has been printed. It was certainly appropriate and suggestive. It is worthy its author.

HOWARD SANDISON, vice-president of the State Normal School, is dangerously sick as the JOURNAL goes to press. It is to be hoped that a change will come for the better soon and that when the reader sees this paragraph he will be well on his way to recovery. No teacher in the state stands closer to the heart of Indiana teachers than does Prof. Sandison.

N. A. CALKINS, whose work on Object Teaching has been so extensively used by teachers, died recently at his home in New York City. For many years he was supervisor of primary instruction in New York City, and for many years he has been a leading member of the National Educational Association, and was at one time its president.

D. M. GRETING, state superintendent, has already visited, officially, more than half the counties of the state and he has his heart set on visiting *all* before the close of his term of office. This is what the law contemplates, but it is what no superintendent has yet done. Supt. Smart and one or two others came near to it, but as yet it has not been fully accomplished.

MRS ADA M. JACKSON, wife of Quitman Jackson, superintendent of Hancock County, died at her home in Greenfield, Jan. 31. She was a

woman of more than ordinary ability and possessed many virtues. She leaves a large circle of friends to mourn her untimely departure. Supt. Jackson will have the heartfelt sympathy of his numerous friends throughout the state.

JOHN M. COULTER has resigned the presidency of Lake Forest University in order to accept the head of the department of botany in Chicago University. It is understood that Dr. Coulter prefers to devote his time to his specialty rather than to perform the duties of president. No man in the United States stands higher as a botanist than does Dr. Coulter. Do not forget that he is an Indiana man.

MISS GERTRUDE SIMMONS who recently won the oratorical prize in Earlham College, is a freshman and an Indian. She hails from the great reservation of the Sioux tribes of South Dakota. At the present time the young lady is twenty-two years old, and her education was begun at White's Institute in Wabash county about fifteen years ago. One of the Quaker missionaries, who was at that time among the Sioux Indians in the vicinity of Deadwood, S. D., persuaded the father of the maiden to allow her to be educated. She left her home without the slightest knowledge of the English language, but she manifested early a desire to learn, and within a year after being at the institute her advancement was considered little short of marvelous. She returned to her home each summer, and many of the Indian students of White's Institute were induced to go there through her powerful persuasion. Miss Simmons is not only making a mark for herself in oratory, but since her entrance at Earlham has proven herself to be one of the brightest members of the freshman class. Personally, she is a charming lady, showing her refinement in every action.

BOOK TABLE.

"THE GEOLOGICAL STORY BRIEFLY TOLD" is a small but very desirable treatise on geology, by James A. Dana. It is fully illustrated and "full of meat." Price, postage prepaid, \$1.15. Write to the American Book Company.

COLUMBIAN SPELLER, COLUMBIAN LANGUAGE LESSONS, AND COLUMBIAN COMPLETE GRAMMAR, are three well-bound, handsome volumes of the Columbian Educational Series, published by "The Werner Company," Chicago. They form an excellent course in elementary English.

"GOOD BOOKS" is the name of a three column 8-page paper just started at Danville, Ind., by Prof. Jonathan Rigdon of the Central Normal College. Its name indicates its character. It reviews and advertises "good books," and besides it contains articles on educational subjects of interest to teachers.

No. 87 of the *Riverside Literature Series* contains *Robinson Crusoe*, and No. 88 contains *Uncle Tom's Cabin*. Both these are quadruple numbers, and can be had bound in paper for 55 cts; in cloth for 60 cts.

The print is excellent, the binding neat and substantial. Surely the very best books are within the reach of all. Houghton, Mifflin & Co., Boston, publishers.

UNDER the general heading, "The Case of the Public School," the *Atlantic Monthly* will discuss the payment and standing of teachers throughout the country. Over 10,000 teachers have been requested to contribute information as the basis of these papers. The first paper appears in the March issue and is by G. Stanley Hall, of Clark University. Subject, "The Witness of the Teacher."

ALTERNATING ELECTRIC CURRENTS.—By Edwin J. Houston, Ph.D. and A. E. Kennelly, Sc. D., New York: The W. J. Johnston, Co. 225 pages, 77 illustrations. Price, \$1.00. This is the first of ten volumes of an "Elementary Electro-Technical Series," designed to give concise and authoritative information concerning those branches of electro-technical science having a general interest.

"CONCRETE GEOMETRY FOR BEGINNERS" by A. R. Hornbrook, A. M., teacher of mathematics in high school, Evansville, Ind., is a neat work lately issued by the American Book Company, Cincinnati, O. Its 201 pages are full of practical graded exercises in the elements of geometry. It is designed especially for use in grammar grades, but it will be found useful in the high school. Price, postage prepaid, 75 cts.

PHILOSOPHY OF SCHOOL MANAGEMENT is the name of the last book by Arnold Tompkins, and is the best book he has yet written. A brief notice of such a book is not easy to write—it must be read to be appreciated. It is needless to say that it is a profound discussion of the subject treated. It is also needless to say that when Mr. Tompkins gets through with a subject there is not very much left unsaid that is worth saying. This notice comes a little late but the book referred to will be new for many years to come. It is published by Ginn & Co.

THE American Book Co. in its excellent series of English Classics has issued the following named books. These are uniform in binding with the other books of this series. The Rime of the Ancient Mariner, 20 cts.; The Tragedy of Hamlet, 25 cts.; The Tragedy of Macbeth, 40 cts.; Paradise Lost [Books I and II], 20 cts.; Conciliation with the American Colonies, 20 cts.; Southey's Life of Nelson, 20 cts. These books are all classics. Their cheapness puts them within the reach of all, and their neat binding makes them excellent additions to any library.

CIVIL GOVERNMENT OF THE STATE OF INDIANA AND OF THE UNITED STATES —Revised by H. P. Leavenworth, Supt. of the Clinton Schools, and published by the Normal Publishing House, is on our table. It has been brought down to date. It is gratifying to note that the civil government of the state comes first and is given large space. This is right. It is of more importance that Indiana boys and girls should know the machinery of their own local government, than that they should know something of the national government. The book is well written, well arranged and well printed, and easily worth its price, 50 cents.

SHAKESPEARE'S TEMPEST.—J. A. Joseph, president of the Central Indiana Normal College at Danville, has just published a commentary on the "Tempest." Last summer, President Joseph published a commentary on Henry VIII and the unexpectedly large sale encouraged him to do a like thing for the Tempest. The commentary is comprised in *seventy-five* pages, with a neat heavy paper cover. To those who have seen President's Joseph's comments on Henry VIII, it is unnecessary to say that his treatment of the Tempest is clear, comprehensive, suggestive and helpful. These little books are sold by the author at 25 cts. each.

TO MANY thinking men and women the "institutional church" seems hardly, as yet, an established reality. Its purposes, scope and management are not widely comprehended; and yet the movement is one of the most remarkable activities of the modern philanthropic and religious world. A number of great institutional churches, with all their educational and rescue agencies, may be found busily at work in the large cities of this country to-day, and the work of several will be described in *The Sunday School Times* by noted leaders in this field. In the issue of February 22, the Rev. John L. Scudder writes: "The keynote of institutional work is ministering to the entire man, and interesting yourself in every department of his being;" and he proceeds to tell how this is done at the Jersey City Tabernacle, in its five buildings teeming with busy workers and planned to suit the special needs of the community. 1031 Walnut St., Philadelphia, Pa.

NATURE IN VERSE.—Compiled by MARY I. LOVEJOY. Silver, Burdett & Co., Boston. This book is a collection of poems about nature, from the best authors. It contains what the poets have said about trees and birds and flowers and stones and insects. It is a carefully arranged compilation of over 270 charming poems, grouped under Songs of Spring, Summer, etc. Many of these are from our best authors; others are simpler rhymes, such as the very little ones can readily learn to read; but all are pleasing, and give pictures and images that will awaken the children's perception to the true and the beautiful in nature. The book is attractively gotten-up, printed on fine paper in clear, open type, illustrated, and bound in choice colors with a pretty design in *fleur-de-lis*. Price, 75 cents.

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GENTLEMEN who desire to accept profitable employment either during vacation or permanently may find it to their advantage to address the American Collecting and Reporting Association, 41-42 Baldwin Block, Indianapolis. The manager of this agency Bradford A. Bulloch was for several years a teacher in the schools of this state, and will cheerfully furnish particulars to persons enclosing stamp to this address. 3-3t.

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FORM—ATOMISM—NATURE.

(In the Form of Comment.)

HOWARD SANDISON.

The first chapter in Miss Blow's work* is entitled, as has already been noted, Atomism. In the previous article an analysis of the thought of this chapter was presented. It is the intention of the present article to comment briefly upon the salient ideas shown by this previous analysis. The purpose of the comment is partly to call into question the soundness of Rosseau in certain respects and partly to hint the educational application.

In some cases the principle advocated by Rosseau is held to be the true one, and its educational bearing is sought.

In other cases the opposite of his doctrine seems to be valid and the application of this opposite doctrine is attempted.

Again, thoughts advanced by Miss Blow in the course of her treatment of Rosseau's principles are noted in their relation to education. The following is an enumeration of the thoughts touched upon in the chapter which have, apparently, a somewhat important educational bearing:

1. The idea that the dominant thought of an age gives form to all spheres of activity. The word "form" has had a peculiar history. In the present day it is generally used to signify that which is external or superficial. It is used as the opposite of substantial. As a rule, it refers to that which may be

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dispensed with. It names that which is considered to be non-essential. The case was very different, however, with the Greek philosophers. It was a very important word among the philosophic terms employed by Socrates, Plato and Aristotle. With them it signified the creative energy that produced a thing, instead of the transient mode in which the thing existed. It expressed the essential. It named that which was abiding. The word "form" was employed to signify the substantial, the universal. If in Plato's language we find, "God is not formless," the meaning is God is not a being without essential, permanent attributes, such as consciousness, personality. If one accustomed to Plato's terms asserts, "The Hindu God is a formless God," the meaning is that the Hindu God lacks personality, consciousness. The term "form," therefore, employed in its philosophic sense, signifies essence. It means that which is the very nature of the thing. It is doubtless thus used in expressing the thought above referred to. The meaning is, therefore, this: If a certain thought is dominant in any age, the ideal underlying any institution as the family, the school, etc., or any philosophic or scientific investigation, or any art production, is a reflection, repetition of that dominant thought. The dominant thought of an age gives, therefore, not merely the outer shaping of an institution or work, it gives the creative activity underlying that institution or work. Another mode of stating this truth is the following: All of the various things pertaining to any given age, have underlying ideas which find their common source in the one dominant idea of the age. This has a certain relation to education. All actions of the teacher, whether relating to instruction or to discipline, must find their source in a common principle.

The doctrine that each branch of study has its central or organizing ideas, is another exhibition of the same thing. The thought that each particular lesson has its own definite purpose, and that every detail in it must be in harmony with this purpose, reveals it again. If one, in attempting to teach a reading selection, as for example, *Snow-Bound*, leads the children to seek first the purpose of the writer, and then examines every division and detail of the poem in the light of that purpose, he is recognizing on a small scale the thought

that a dominant idea gives form to all the varieties of activity in its given sphere.

The same may be shown in composition work. For example, the teacher may begin with the class to work out the description of a certain church. Let it be assumed that the children are led first to discover its purpose. This is obtaining the dominant idea. If as, one by one, the attributes and parts are discovered, each is viewed in reference to the purpose, such work would disclose the fact that the attributes selected, the parts required, the order of their presentation, the fullness to which they are presented, the variety of emphasis in presentation, the choice of language, etc., are determined by the dominant idea—the purpose.

The teacher, therefore, may apply to education the thought that “the dominant idea of an age gives ‘form’ to all spheres of its activity” by asserting—“The dominant thought in any branch of study, in any lesson, in the treatment of any object, in the discipline of the school, in any phase of school work, however small, gives ‘form’ to all of the included details.” In giving form it gives organization.

2. THE IDEA OF ATOMISM.—This as a doctrine, if accepted in its full bearing, would render impossible any unity of action in the movement of education, whether on the part of school officials, teachers or pupils. By atomism is meant the doctrine that each thing is isolated, that it is independent. A mind controlled by the spirit of atomism would assume everything to be distinct from everything else. Inter-relation by such a mind would not be definitely denied; it would be merely unnoticed. Atomism results from the extreme activity of a function natural to the mind. This is the activity of discovering differences, of analyzing. One element in all mental action is the distinguishing characteristic. If an object presenting a high degree of sameness is exhibited to the mind, the natural effort is to discover distinctions. The first movement of mind is to grasp things as wholes; as undifferentiated. The second movement, and one naturally growing out of this first, is the discovery of differences. If the mind's development is arrested, and this second stage becomes the final stage, the doctrine of atomism prevails. In such case, the individual's attention is always incomplete.

He then exists in a world which is without a center of gravity physically, intellectually, morally. The world is not to him a universe. It exists in his mind as manifold. Each thing in this manifold existence is a particular, an isolated object. It is also relative. Having failed to discover the essential, the permanent, everything is constantly shifting.

The teacher may therefore apply to education this doctrine of atomism by thinking "Atomism is to be regarded as a temporary stage in the study of every object, whether in the study of an island, of the constitution of a government, of a noun or of a leaf. This stage of close analysis is, however, to be merely a basis for the higher and more distinct unity which is to result in the succeeding stage of thought. In every reading lesson, for example, the pupil is to be given an opportunity to examine it first in its entirety, so as to be enabled to grasp it as a whole, at least in feeling. He is then to be given the opportunity to analyze it closely into all of those elements permitted by the dominant thought. He is not, however, to leave it at this stage. He is to pass into a third movement in which these elements that have been accurately and clearly discriminated, are to be drawn back into the unity of which they are merely varying manifestations."

3. THE IDEA THAT MAN IS BY NATURE GOOD, *i. e.*, that the child in his undeveloped state is essentially good. The term "nature" is employed in a double sense. In one respect it is correct to examine an apple seed and upon discovering its various attributes to assert—"These show its nature." In a truer respect one may follow all the changes the apple seed undergoes in its progress to the full-grown apple tree bearing ripened fruit and assert, (referring to this ripened fruit), "This is the nature of the apple seed." What a thing is when fully developed—that we call its nature. Therefore, if the apple seed just as it is, is nature, the apple seed developed into the full-grown tree is more truly nature.

The end, the design, the destiny of a thing is really its nature. The most unnatural condition of a thing is its real condition, its present, undeveloped condition. Human society existing for the bare needs of life, is natural; but human society existing for the good of life, for the harmonious unfolding of man's capacity, is still more natural. The indi-

vidual existing as isolated is not self-sufficing. This condition is indeed his nature, using the term nature in a certain sense. The individual existing in harmonious participation with the social institutions is self-sufficing. This is more truly man's nature than the first condition. Whenever a teacher, noticing a weakness in himself as a teacher, or in the pupil as a learner, endeavors to excuse himself from the attempt to remove this weakness by saying—"It is nature," the great thought that each human being is essentially a being capable of removing his own limits, that his true nature is freedom—this great thought is forgotten.

The thing to be done is to keep clearly in mind the defect of the self or of the pupil; to work persistently towards its removal with perfect faith in the result. Prof. James, in his discussion of Habit* presents this thought in a very helpful way:

"Let no youth have any anxiety about the upshot of his education, whatever the line of it may be. If he keep faithfully busy each working hour of the day, he may safely leave the final result to itself. He can with perfect certainty count on waking up some fine morning to find himself one of the competent ones of his generation, whatever pursuit he may have singled out. Silently, between all the details of his business, *the power of judging* in all that class of matter will have built itself up within him as a possession that will never pass away. Young people should know this truth in advance. The ignorance of it has probably engendered more discouragement and faint-heartedness in youths embarking on arduous careers than all other causes put together."

The teacher may likewise apply this thought, that the term nature names both the real and the ideal, by holding that the present in the child—his already acquired ideas, his tendencies, his emotions, are not to be regarded as final, but as merely the material out of which is to be developed more perfect capacities in each respect. This more perfect condition is to be regarded as the true nature.

4. THE IDEA THAT THE INSTITUTIONS, THE SCIENCES, THE ARTS ARE ESSENTIALLY BAD.—To hold this view is to fail to distinguish the idea of the state from the various particular

forms in which the idea of the state is manifest—the idea of the school from the numerous examples that exhibit to a degree the idea of the school, etc. The state in its true condition reveals the divine, the ideal in man, and thereby stimulates him to attain it. The various particular states generally reveal man's selfishness and ignorance to some extent. It is important to notice, however, that a state which is essentially despotic, and which, therefore, presumes upon man's ignorance and exhibits the selfishness of the rulers, always pretends to be laboring in the interests of enlightenment, and for the repression of selfishness. Like all other evil things, therefore, it is constantly undoing itself because *of necessity* it must inculcate the doctrine which undermines it. The school is the ideal of the child objectified, but particular schools, as a rule, reveal much of man's ignorance and caprice. Such is the case, also, with each of the other institutions. Society's institutions are not, on that account, to be done away with. Neither are they to be reformed according to any individual's particular ideal. Each institution must be reformed in the light of its own ideal, that is, in the light of the ideal it is pretending to manifest. This ideal, however, is the ideal of man's harmoniously developed powers. The same is true of science and of art. Each, in the best sense, is a reflection of man's higher nature. One who flees from the influences of the institutions, of the sciences, of the arts, conceals from himself the clearest image of his higher nature.

The thought of Rousseau that the "institutions, the sciences, and the arts are detrimental to mankind," has an important application in education through the perception of the truth of its opposite, as follows: The child in school is to be led to look upon each restriction of the organization as an instrument of freedom; as a thing required by his own need; as a thing placed here by the law of his own being. To make this thought clear to the child is more really the teacher's work than instruction in geography or history. The teacher is to reflect more and more deeply upon the ideal of the child. He is to study with greater and greater care the different ideals of the child that have been handed down through the progress of the race. He is to see more and more clearly that the ideal nature of the pupil, and this

alone gives law to the school. Indeed, one should not say, "gives law to the school," but rather "is the law" of the school. The teacher who, by his study, has placed himself in this condition of mind, will begin, unconsciously, to test every requirement, every course of study, every method, every device, every manifestation of feeling, as to its fitness to stimulate the child in his progress toward his ideal.

IN DEFENSE OF THE TEACHER.

J. A. JOSEPH, PRES. CENTRAL NORMAL SCHOOL.

I speak in defense of the teachers of our common schools. For years we have heard nothing but discourses and read nothing in the educational line but articles on the incompetency of the country school teacher. Institutes and Teachers' Associations make that the great cry of their work. On every hand the teacher in our common schools is criticised, found fault with, and goaded to desperation. He has to take it. If he has a pupil who for generations has been dull and vicious, despising books and schools, he is censured because that pupil does not become a little angel under his care. The school system is an absolute monarchy in which the teacher has nothing to say. Men, not selected by the teacher, make his rules, his very program, lay out the work he must go over and no more, fix his salary, determine the use of his time and money, all without so much as by your leave. Is no one to rise to his defense? Must not the day come when he shall have a voice in his control? Who yet has ever thought, in Indiana, of the common school teacher's rights? Really has he any? Ye College professors, institute instructors, county superintendents, etc., it may be that wisdom is yours, but it shall not die with you and was not born with you. We need your help, your inspiration, your learning, but not your goading, your fault finding, your eternal criticisms.

In the educational chain of our state, from the pupil in the modest school room to the leaders of our thought and actions, the common school teacher has the most difficult and discouraging position to fill and is filling it better than any other link in the chain. He is the patient, toiling, sacrificing,

poorly paid factor, and yet no one, not even he himself has been courageous enough to speak a word in his own behalf.

Why should there be so great qualifications for a country teacher and none whatever for a county superintendent? A school teacher must have at least one year's license which has cost him labor and money, and rightly too, but the superintendent's qualifications extend to getting the trustee's votes. He may be a perfect ignoramus as far as qualification is concerned and not able to pass for a six months' license. Why is this, ye wise men of learning? Trustees, who are placed over our common schools are often wholly ignorant; good men, men of sense, they are, but they need never have been in a school room to get this office, yet they are the men to employ a good teacher, tell him when he is doing good and harm and care for the educational interests of the township. Could we not with profit give the teacher a rest and talk of this blunder awhile? What qualifications must the state superintendent have? He is over the school interests of the whole state and if he can "pull" the political wires, whatever his degree of ignorance, may fill the office. It makes no difference if we have always had competent men in the above offices, as a rule I think we have, but what are their necessary qualifications? Are there stated qualifications for positions in our state colleges? Of course the authorities are likely to choose good men and women but must they do so? Is there any chance for personal friendship, political "pulls," etc., to carry a teacher into our state institutions? If so, the system there is weaker than that part that has to do with the common school teacher. If our trustees can swindle the people out of money or squander it for them, I wonder if there again is not a weak place in our system? Has it not been done? I would the teachers of Indiana might have an era of peace and the other factors in our educational system might be brought up to their (the teachers') present standard. It has not been done because the political influence of these other factors has been too great and they can block progress or criticise the teacher and thus turn attention from them to him. The teacher, being out of politics and trying to do his duty, has no such influence. He can't help harmful legislation and

there is much of it in his life, nor can he get legislation much in his favor. If he asks for bread he is given a stone.

Teachers must make schools interesting say our leaders. Children must like to go to school. It would be nice certainly. But what are the parents' duties along that line? Teachers should like to attend institutes too and not be forced to go. Now apply the rule. Instructors should make institutes so interesting that teachers would delight to go, then the superintendent would not have to mark off their average to force attendance. Let's apply the rule all along the line.

O, teachers are so ignorant! Well, are superintendents better educated? They have such poor judgment! Well, how about the trustees? How about selecting our school books, has there been no mistake made? No one is to be blamed especially for these mistakes but we should use the same mercy and fairness in the teacher's behalf.

He has a great work to perform and he is performing it nobly. He needs intelligence, education, methods, inspiration, all these, but he doesn't always get them from the source he has a right to expect them. Some of the others are at fault too. Let's make his environment better. They who have the power should give him better opportunities, more encouragement, a nobler source of inspiration, better tools to work with and holier ideas and purposes in his sacred calling by placing around him such sources of good and fairness that all will develop in that line in which we are trying to force the teacher alone. I believe in democracy in education and in absoluteism in nothing. I take off my hat to the country school teacher.

THE CULTIVATION OF ORAL EXPRESSION.

CHARITY DYE.

(Discussion at State Teachers' Association, Indianapolis, 1895.)

According to Bacon, "Conversation makes the ready man." Realness in speech is certainly an end greatly to be desired by teachers for their pupils—a readiness that is correct, pleasing, intelligent and fluent. That there is a decline in the power of oral expression, must be admitted. We notice it

in the home, in the school, in the convention, on the platform and in the pulpit. This decline in the home arises partly from the conditions of our complex life with its multitudinous demands which leave no time for leisure and opportunity for the free interchange of thought that formerly existed in the family circle. Now the six-o'clock-dinner-table is often the only place where the entire family meet, and there engagements for the evening interfere with the delightful free converse that ought to be.

Another hindrance to happy oral expression is the multiplication of books. The printing press, sending forth its numberless volumes, has furnished almost every home with well-filled library shelves, and the easy access to books makes the reader more careless and less thorough than he was in the times when books were truly "the king's treasures."

The school must also bear its blame in helping on the decline in the power of oral expression. Running through the entire system is the tablet, whose use grown to an abuse, takes the place of memory, hinders that clear grasp of a subject that would be necessary without it, and removes the self-reliance that its absence would foster. There is also in some minds a wrong conception of the recitation for secondary pupils. First, that of the lecture plan will not do because high school pupils have not had the necessary drill in analysis and classification and the ability to see content with sufficient rapidity and accuracy to profit by the regular lecture recitation. Worse than, and opposed to the lecture system of recitation is the "pop-in-jay" recitation. Here each question is followed in the same breath with a "next," "next," "next," if the pupil is not upon his feet by the time the question is asked; or, if the pupil succeed in rising in answer to a thought question and make a slight blunder, the same "next" cuts him off, and his second state is worse than his first. The reader can make his own comparison between recitations conducted on the foregoing plans and a recitation where the pupil is allowed time to gather himself together and to attempt the best answer he is capable of giving—the teacher in the meanwhile accepting as much truth as the pupil states and leading him to a perception of larger truth or to see his own error.

So much for our faults. What can be done on the constructive side to foster the power of pleasing oral expression? Foremost it seems to me, we must recognize the pupil in himself and proceed from him. It is the writer's firm conviction that every pupil should be encouraged:

First, to have an intelligent opinion;

Second, to have integrity to that opinion;

Third; to express that opinion with modesty, especially if it be a differing one;

Fourth, to hold that opinion subject to change upon the recognition of a higher truth, because this is the only means to growth.

A pupil's opinion may be of no account in the consensus of the world's opinion, but it is of vital importance to him as an individual; it is that by which he is to grow; it is the nucleus to his thought; it is his starting point in mental activity. A poor opinion is better than none. It is of the utmost importance that one have integrity to his opinion, even to saying "A pop-gun is a pop-gun though all the world say it is the crack of doom." Having integrity to one's opinion and being open-minded enough to change it in the presence of a larger truth is laying the foundation for thinking power and true nobleness. To express a differing view with modesty and kindness is nothing short of a fine art. It paves the way for right criticism; it gives self-confidence; it fosters sincerity. Many an untruth has been told by silence because one had not the grace to express his difference kindly, and as a consequence lacked the courage to do it otherwise. All of us know some friend who is sincere and kindly at the same time, and appreciate the value of this power.

Having gotten the pupil upon his feet and encouraged him to have an opinion, he must still have other conditions furnished him; they are these:

First, he must have an atmosphere of approval; this is largely provided by the teacher. The pupil must know that there is recognized in him a best, and this knowledge will stimulate him to give that best. No one can ever appear well in an atmosphere of disapproval.

Second, he must have a sympathetic audience; this is fur-

nished by his mates. They must be open-minded as opposed to stolid.

Third, he must have stimulus and direction to thought.

Stimulus to thought is the foundation element in these conditions, as we think in words. Perhaps the first stimulus comes in the range of subjects. Every subject in the curriculum affords opportunity for oral expression in the line of accuracy or of fancy. The realm of subject-matter is bounded only by the limits of the external world—of human experience and the imagination. The sciences, both exact and natural, give the pupil vocabularies of their own, and the teacher who notes the language in these subjects sees the pupil leap in advancement. We must take the pupil face to face with nature if we wish to foster the friendliness that comes from true intimacy. Speech will be loosened when this intimacy springs up.

Literature—the recorded experience of man's spirit, is an unfailing source from which to draw all the way along. Pupils can find a connection between literature and life that quickens comprehension. Note the home picture in "Snow Bound," the unfailing affection in "Evangeline," the test of friendship in "Miles Standish," the comparison between Richard and Saladin and also the manly Sir Kenneth in "The Talisman," Malcolm Graeme in "Lady of the Lake," and Rebecca in "Ivanhoe." In addition there is the beautiful imagery, the choice diction, the deep content, and the transforming power as a work of art over the human spirit.

Fiction is especially helpful in fostering oral expression. When pupils have found plot—plot incident and *character* incident, they know what they are talking of, and readily make the connection between literature and life. If it be truly noble in Sir Kenneth to stand before King Richard in full acknowledgement of his wrong in deserting the banner, in wishing to shirk none of the consequences attendant upon this wrong, though he might have gone to the enemy's camp, have fled or have lied; if he preferred punishment to dishonoring his own highest nature, the pupil can at once feel his kinship to Sir Kenneth and see that it is as truly noble in himself to take the consequences of *his* act as it was in Sir Kenneth. Another stimulus to thought and hence to

oral expression in the recitation is the enrichment that comes thereby. One pupil brings his one thought and takes tribute of the thought of all. He comes poor and goes away rich. He compares his thought and his thinking power with that of his mates, and sees both himself and his subject in a new light.

One of the greatest helps to oral expression is kindly criticism. It is good for the one criticised, for the critic, and for the other listeners. The one criticised has to learn to "side with his critic against himself," to see himself with another's eye; it teaches him forbearance and patience. The critic must, first of all, reveal his own standard; then he must tell how nearly the thing criticised reaches that standard—this is looking for the merits; he must lastly tell wherein the effort falls short of his standard—this is giving the defects; defects should be mentioned last. The one criticised must hold himself ready to be challenged for his statements, must produce his facts and give his reasons.

Oral composition is an excellent means for affording pupils opportunity for expressing themselves. These compositions may be previously assigned or they may be purely impromptu, wherein each pupil receives a slip containing a subject new to him. It once happened in a certain school that this exercise was given near promotion time and one pupil was reported to the principal as doubtful of promotion in English. Her slip had on it "How I know I have learned this year." When she spoke she revealed so much *hidden* power in the way she compared herself at the time (June) with herself in September—in the manner in which she told the course along which she had come and what she had gathered on the way, that the teacher took her evidence, promoted her in English and found no reason to regret it.

In connection with oral composition is the exercise of story-outlining, allowing each pupil, say one and a half minutes. This is especially suitable in study of "Tales of a Wayside Inn" and in the study of Irving and of Hawthorne. Some pupils will not get through but they will try harder the second time. This exercise develops power.

There is also another exercise that affords valuable aid in cultivating the power of oral expression; it is for want of a

better name, called a conundrum exercise—usually confined to authors. Each pupil brings to class an outline of some prominent author's life and tells of his works and what he was and did until the class guess rightly. The skill here comes in, in telling all the facts in a way that will not hint the author too soon. A boy who gave an especially fine account of Cooper said, "I read three books to tell that." These are only occasional exercises, once or twice a year. Nothing need be said of debates and rhetorical exercises. They are the long recognized and long practiced means for cultivating the power of oral expression. The senate in connection with civil government also enables one to think on his feet and to say what he thinks.

Works of art in the presence of the pupils are an ever enjoyable theme for conversation. In some cities an art-loan-collection is sent on from school to school. Pupils are not only learning art terms and art forms but being transformed by the influence of the art in itself.

"What is going on in the world" is always of interest to pupils. In some schools there is a space of the blackboard set apart as a bulletin upon which any pupil may place a great event of recent happening and open the conversation thereon; for example, "America for Americans"—"Grover Cleveland" recently met a teacher's eyes upon entering her room. The bell for passing cut short an interesting and profitable conversation.

Reading aloud deserves mention in this discussion. Charles Dudley Warner laments the rarity of this valuable and pleasing art. He thinks it as rare as fair piano-playing.

Familiarity with a subject is one of the absolute essentials to free oral expression. Nothing can take the place of it. The most interesting debates and general exercises increase in their interest as the subject has been made familiar. Indeed, one is incapable of accurate reasoning until he is a master of the facts.

There are, in addition to the regular school work, some collaterals to school life that aid the pupil in finding and mastering himself. It has in some schools already proved a corrective to the loud tone used by many pupils as soon as they leave the school building, to give them freedom of

speech in the corridors when classes change and also visiting privileges at certain times before school begins, under the restrictions of library quiet. It is an art to speak in a low tone.

Let us close by repeating what we consider fundamental to the cultivation of oral expression in high school, or, indeed, in any school.

1. Pupils must be encouraged to have an intelligent opinion.
2. Pupils must be taught to have integrity to that opinion.
3. Pupils must be taught to express that opinion with modesty, especially if it be a differing one.
4. Pupils must be taught that change of opinion to meet a larger truth is an essential to growth.
5. The teacher must furnish the pupil:
 - a. An atmosphere of approval.
 - b. A sympathetic audience.
 - c. Last and most of all, a stimulus and direction to thought.

These things being done, true converse, growing out of true thinking and leading onward to right doing, will be an inspiration in our midst.

SHAKESPEARE.—HENRY VIII.

JONATHAN RIGDON.

Shakespeare's contribution to English history deserves notice. It includes ten chronicle plays, beginning with King John and the Magna Charta and ending with Henry VIII and the Reformation. Some critics have pointed out as obvious, others have rejected as wholly unfounded, the unity of purpose running through them all. Some one has called King John the prologue and Henry VIII the epilogue to Shakespeare's great English historical drama consisting of ten plays. Between the plays and the history there are, of course, discrepancies in the events and persons, yet Charles Knight, both historian and critic, declares: "History strictly so-called, the history derived from rolls and statutes, must pale its ineffectual fire in the sunlight of the poet." And Heine says,

"The great Briton is not only a poet but an historian." The drama cannot set forth the details, only the spirit of history. Or as Lord Bacon puts it, "Dramatic poetry is like history made visible, and is an image of actions past as though they were present."

Henry VIII is pretty generally believed to have been written in 1613; so if Shakespeare wrote it, if not the last, it was among his latest productions. As is well known, however, the authorship of Henry VIII is a much-disputed question, a majority, but not all, of the critics conceding that only part of it can reasonably be attributed to Shakespeare. As early as 1758 Edward's *Canons of Criticism* called attention to peculiarities in the versification of Henry VIII, but for nearly a century the subject received no serious consideration. In 1850 Mr. Spedding published his study of the play, in which he had elaborated a suggestion casually dropped by the late Lord Tennyson, that many passages in Henry VIII were very much in the manner of Fletcher. Basing his conclusions chiefly upon considerations of dramatic construction, diction, and meter, Mr. Spedding assigned the parts as follows: To Shakespeare, Act I, Scenes 2 and 3; Act II, Scenes 3 and 4; Act III, Scene 2, (to the exit of the King); Act V, Scene 1; and to Fletcher all the rest.

The play is by no means destitute of the esthetic element, but its beauty is not of the highest kind—that which comes from grasping in their proper connection, all the multitudes of varied parts that go to make up a complex, structural unity. Here the only beauty we find lies in the individual scenes and characters and passages, but this is worth much. The fallen Buckingham's

Be what they will, I heartily forgive 'em, * * *
There cannot be those numberless offenses
'Gainst me that I cannot take peace with; no black envy
Shall mark my grave;

is touchingly beautiful. The same is true of the fallen Wolsey's speech to Cromwell on the vanity of ambition, and of his famous soliloquy, in which he bids farewell to all his greatness. The character of Catherine is beauty without a blemish, and her death-bed dream, in which she witnessed her own reception among the angels, is one of the prettiest

things anywhere to be found. Griffith's honest recognition of the merits and charity for the faults of the fallen Wolsey, the King's tribute to Buckingham, and numerous other passages are very beautiful.

The characterization of the play is indefinite. We are unable to determine from anything that is said whether or not Wolsey induced the witnesses to testify falsely; for this reason we can not positively know the extent of Buckingham's guilt. I suggest this, however, simply as a fact, not as a fault of the play. Facts in the lives of our associates are often inconsistent, and their statements are frequently as irreconcilable as were those of Buckingham and Wolsey. In such cases in actual life we always interpret the testimony in the light of our best reason. The poet may expect us to do the same here.

The first is ruled by reason and manifests itself through reason. The second is controlled by a power above reason and is unintelligible except in the manifest fitness of its outcome. The drama, whose aim is to hold the mirror up to life, has unquestioned claim upon both domains. The play of King Henry VIII lies in the second. All human plans and purposes are set at naught. Wealth and power and learning accomplish the very end they seek to avoid. Virtue and strength are cast aside and weakness becomes queen. He who sacrifices virtue and goes contrary to every law of right is still permitted to rule and to achieve great glory. But the play permits it because history permits it, and that is enough to make it true to life.

It would seem to be in order now to show the artistic perfection of the play as a whole, to exhibit its dramatic unity. For the best of reasons, however, we shall have to forego the pleasure of such a showing. Considered as to its objective form this play has no structural unity, which is indispensable to any important creation of art. The three great tragic events of the play, which give to it what vertebrate consistency it may be said to possess are (1) the execution of Buckingham, (2) the divorce of Catherine, (3) the fall of Wolsey. Each of these is truly a great event, but their connection is mostly accidental, and so far as it is essential, it is illogical. Between the first and second there is no apparent connection.

The second is presented as the ground of the third, since Wolsey's connection with the divorce proceedings led to his fall; but of these two, the second is of much more importance than the third, against which logic rebels. Furthermore, it does not appear that any one of these events is the theme of the play. What is the theme? Is it coherent in structure? Does it possess any artistic perfection, any dramatic unity? Mr. Dowden says: "It is indeed incoherent in structure. After all our sympathies have been engaged upon the side of the wronged Queen Catherine, we are called upon to rejoice in the marriage triumph of her rival, Anne Boleyn. The greater part of the fifth act, in which the interest ought to be gathering to a head, is occupied with matters in which we have not been prepared to take any interest by what went before, and in which no interest is reflected by what comes after."

Still more adverse is the criticism of Hertzberg, a German commentator, who says the play is "a chronicle history with three and a half catastrophes, varied by a marriage and a coronation pageant, ending abruptly with the baptism of a child." From the formal side, the play certainly fails to meet the requirements of art. The conflicts with which it opens give no suggestion of those with which it closes. The King is the only character that remains in the play from beginning to end, and his actions are controlled by no constant purpose. Each of the five acts could, with but slight modification, be made into a drama possessing at least more objective unity than does the whole. While no two consecutive acts are altogether independent of each other, it is nevertheless impossible to find explicitly stated or even definitely suggested, any single principle running through the entire play, dominating its character and controlling its events. No such principle is visible even to the actors themselves, though it may be that Shakespeare, who is conceded to have been not only a dramatic artist, but also a profound historian, was able by looking backward to grasp the historical principle that, unconsciously to the characters, controlled their actions. If we then insist upon having a subjective theme for this objectively disjointed play, that theme must be England's change of religion. The events all fit into this theme, but only in accidental, not in logical connection; not logical, for

human reason is unable to see in the beginning any trace of the outcome. Here are the premises: Wolsey, an uncompromising catholic, a powerful man with even the King under his thumb, was bending his every effort to strengthen the church at whose head he some day hoped to stand. The good Queen Catherine, who was as strong as she was good, and who had great influence over King Henry was also a devoted catholic. Henry cared nothing for religion. Lady Anne Boleyn, merely one of Queen Catherine's women, was a protestant but was without strength. Catholicism almost ruled the world. For protestanism to come from these premises seems contradictory to human reason. But this is the conclusion that history drew and history is above reason.

All dramatic art or any other, must be true to life, but life is not all logic. Life is a compound of two elements, distributed in about equal proportions—human purpose and super-human providence.

CONCENTRATION AND ACADEMIC TRAINING.

L. W. FAIRFIELD, TRI-STATE NORMAL, ANGOLA.

Much space is given in current educational literature to "concentration, correlation and apperception." Is it new? Not in my own experience, not in that of the live teachers whom I have known in secondary schools for twenty years. Here are some working principles upon which students have been urged into a more thorough knowledge of common branches.

1. Push language work till it is forced into the fields of rhetoric and literature.
2. In physiology, show its dependence on physics and chemistry.
3. Search out history till government and social institutions are touched.
4. Apply arithmetic to all these and reach out toward astronomy.
5. Geography is not dead but alive forevermore in nature and institutional life.

In these ways the interdependence of all school studies will

be apparent; and further, their dependence upon higher course studies will be so clearly demonstrated that a longing to know more will take possession of the soul. *This end is soonest reached in a sincere effort to master a good text.*

The above constitutes the essential articles in a creed that many sincere schoolmen in this state are following. But we are told that it is the common school teacher, *above all others*, that needs the knowledge embodied in the various books, leaflets and periodicals upon the subject of "correlation and concentration in General Method."

Dr. Rice proposes to reach it by taking the text away from the teacher. Some educators would reach it by long and labored discussions in philosophy in connection with the study of common branches.

The directors of education in Indiana would secure such knowledge to the common school teacher by forcing method upon him in state examinations and reading circle work.

It is not impertinent to ask, "Can it be given to him at all in his present condition?" And even if that were possible, might it not be better to approach it by seeming indirection through academic training?

The painful process by which the untrained teacher struggles to the apprehension of the themes in our best literature is apparent to us all. That he comprehends it, is out of the question. Its form is to him x , and too frequently, $x^2 + 2p^2 = q$; symbols only of what others tell him is beauty of thought in elegant form. "The Autocrat," a delightful book to the initiated, is to a majority of the teachers in the state, without academic training, the memory of a disagreeable task, a travail of soul—without compensation. It is perhaps an open question, as to whether the deductive method of presenting the correlation of studies and the principle of concentration should be followed or the inductive method forced upon them.

Compel a better preparation in academic work and the principle of correlation and concentration will follow. He who is fit to teach at all cannot help but correlate and concentrate much that is possible in school work. When a teacher understands the principles of physics, he will use whatever is necessary in the explanation of difficult work in

physiology. More than that, how can he correlate and concentrate what he does not understand? Psychology is dependent upon the physical science for illustrative material. If the teacher knows next to nothing of these sciences and has not the mental discipline that comes from their accurate study, his mental power will be expended on the illustration and he will have but little left for the realization of psychical truth. His illustrative material is fragmentary. With this fragmentary knowledge he gropes hopelessly in the darkness of psychological terms. Its terms not comprehended, he reads into them whatever fanciful interpretations may suggest themselves or sits dumb in mental darkness because he is asked to leap from unknown to unknown in plainest violation of the fundamental principle of all mental activity.

The whole of pedagogy rests on psychology. Psychology employs introspection. Introspection requires much knowledge well in hand. The uneducated have not this knowledge. It further requires some mental discipline. He has not this discipline. He becomes troubled or indifferent. The troubled extend their education and seldom return to the common school. The indifferent and the on-coming, "illy-prepared" remain to go over again and again the sifting process. The common schools thus have "always with them" the incompetent. This is the result of ten years such work in the common schools of Indiana. That the psychological work in the state is barren of results, save to those who have considerable academic training, is a commonplace among intelligent teachers. We are trying to build a superstructure in the air. Too frequently the educator who thinks he has placed the finished structure upon the foundation of the common-school teacher's education, will find that he has been rambling through his own building only, while the teacher with "eyes that see not" and "ears that hear not," gets only "Words, my Lord, Words."

The average country school teacher does not know what the terms "correlation and concentration" mean. He has never advanced far enough to have the various studies *correlated in him*. His conscious or unconscious use of concentration is just in proportion to the knowledge he has of the school studies.

To him only, who has grammar, analysis, rhetoric, literature, psychology and logic is correlation possible in language in its fullest sense. And when I follow these studies through in enumeration, I mean to carry with them parallel lines. The contention here is not against the value of "correlation and concentration," but the way to reach it in primary instruction.

Whether the generalizations of those who have built an edifice, cleared away the scaffolding and rubbish and adorned the interior and exterior with the finish of culture studies, is the way to instruct the ignorant artisan toiling in brick and mortar, is an open question. That much good has come from the forcing to the front of psychical truth in educational lines is apparent to all; but that primary instruction will ever be what it might be and ought to be, till wider knowledge of subjects not required to be taught is demanded, is also apparent. And it may also be true, that while we wait for the millennium of the ideal teacher, the present generation will be better served through emphasis upon knowledge rather than upon philosophy.

THE MEANING OF THE HERBART MOVEMENT IN EDUCATION.

CHAS. A. MCMURRY, NORMAL, ILLINOIS.

It might be said in the first place, on the negative side, that it is not the purpose of this movement to graft a foreign system of education upon the American stock. It is rather an attempt to study the principles of education in a liberal spirit and to apply them to our school studies.

An examination of the watchwords which have been heard from the camp of the Herbartians for the last few years will make it plain that some of the old fundamental questions of education have been asked over again, with a strong emphasis upon certain expressions which perhaps have not been sufficiently emphasized before.

It may be said that the Herbartians have set up several important problems for solution. It is not claimed that they are yet even approximately solved, but that it should be the purpose of the teachers to work at their solution.

First of all, comes the question as to the aim of education. An old, old question, but appearing in a new and modified form in every succeeding age. So long as the people have a profound interest in this deepest of all questions, education is sure to be enriched and intensified by its discussion. It involves the highest ideal of character development, well rounded and complete. As soon as we have settled the great problem as to the relative value of studies as means of education, we come to the inevitable, practical question of method, (using the term method in its broadest sense). Under the term method, we mean the selection and arrangement of the materials of study as suited to the periods of child growth and the manner of treating these materials when so selected and arranged.

The Herbartians have entered into a campaign of discussion along the following lines.

1st. Apperception. Two ideas, at least, have come clearly to light in connection with the term. (a) A closer scrutiny of a child's present knowledge for the purpose of using it in acquiring still more. All a child's knowledge and experience are for constant use. The more he employs it in his constant acquisitions, the more thoroughly organized will be his mental stores. (b) Deeper and more significant even than this is the patient and sympathetic study of children implied and emphasized in the term apperception. Some of the best thinkers in our country, not Herbartians, have recognized the deep, permeating influence of this principle in all the details of teaching.

2nd. Correlation. The inter-relation of school studies (the relation which they bear to one another) will always remain one of the cardinal problems of instruction. Far from having solved this problem, the terms correlation, co-ordination and concentration, only suggest its difficulty and importance. It will take many years of careful study and practice with educational materials before we shall get even an approximate answer to this problem. Neither in Germany nor in America have the Herbartians yet given even an approach to a satisfactory answer to this question. It is something, however, to have brought out the problem clearly and to have set educators to work upon it.

3d. Interest. The discussion of this term, also, lands us in the midst of confusion. Many of the best teachers will have none of it and many others, just as good, will have nothing without it. It is probable that the two parties do not understand each other. One party claims that interest leads directly to will-development, the other that it tends to destroy all genuine will. From the Hebartian standpoint, interest is a vital necessity in good instruction. It emphasizes that phase of mental life known to all the psychologists as feeling and sensibility, which has been heretofore so miserably neglected in instruction. Interest is closely identified with self-activity and belongs, therefore, to the inner-self, or personality of the child. Interest, therefore, may be called a sure test of the genuineness of mental activity; when the child has no interest in a study, mental activity is a counterfeit—the spirit of the thing is not there.

4th. How to reach concepts or general notions is the fundamental question in the psychology of method (using method in the narrow sense). On the basis of a close study of psychological processes, Herbart and his disciples brought out a plan for the treatment of important topics in a study. This process of handling topics is known as the *Formal Steps* and is a process of working up through particulars to a general truth. Such an effort as this to formulate a psychological method of handling topics is certain to bring on a storm of criticism. It is decried as formalism, mechanism, as destructive of all originality in the teacher. But after all, we are under obligations to find out and apply to instruction the laws of human thought. And it is, perhaps, not too much to say that a few of these simple, fundamental laws are now understood and should be applied to the ordinary work of teaching; at any rate this is the problem which the Herbartians have again forced on the attention of teachers.

5th. The culture epochs. This term also leads us into a labyrinth of conflicting opinions. Of all the notions suggested by the Herbartians, this is, perhaps, the wildest. The notion is that the child's growth epitomizes the history of the race and especially of the nation or tribe. If anyone were called upon to formulate the meaning of the term culture epochs, he would probably fail. It has not yet acquired a

definite or scientific meaning. It is shifting and changing under discussion. Like Proteus, when seized by the investigator, it assumes changing forms and puzzles the thinker. And yet underneath this idea lurks an educative truth of astounding value. It is wonderfully suggestive not only to the philosopher and psychologist, but to the teacher in the primary and intermediate grades. Before passing by the notion of the culture epochs as a vagary, caution would suggest that we consider from how many different standpoints this notion has been approached by the best thinkers. Scientists, philosophers, poets, educators have given expression in various ways to this notion.

In conclusion it may be said of the Herbartians that they are seeking to enrich the lives of children by enriching the course of study, and by finding out and applying natural and rational methods of instruction.

UNIFORM COURSE OF STUDY.—SECOND, THIRD FOURTH YEARS.

R. A. OGG, GREENCASTLE, IND.

In the preceding article we saw the grounds for division into culture, nature and form studies, and some of the points of correlation of these lines in the work of the first year. In this we shall look for the same relation as it appears in the three succeeding years. At the head of the culture studies in the second year is found Robinson Crusoe for a half year. The battle over this particular book has raged so furiously that it is safe to assume that an argument would here be wholly unnecessary. If the theory of the culture epochs and their value be accepted at all, there will be no question regarding the fitness of this book. As to its peculiar power to arouse interest, stimulate thought and awaken the liveliest play of imagination, I apprehend no teacher who has given it a fair test and no superintendent who has visited rooms where it was the work of a period, will for a moment question. The life of Robinson is so simple, the narrative so natural, the description so vivid, the whole comes so within the range of appreciation of the children that, having heard part, they

clamor for more, and having heard all, they plead for its repetition. Even though the teacher may not plan to utilize it in other work, it has taken such hold upon them that they of their own motion frequently introduce it. Speaking from the stand-point of observation, I should say that more than any other it is capable of being utilized as apperceiving material. The children at this time in their nature work are studying autumn fruits, leaves, seeds, etc., making their observations of the weather, noting the coverings of animals, the use and adaptation of hands, nails, etc., the teeth of various animals—in short, doing what Robinson did in laying hold on the animate and inanimate world around them and they feel the correspondence.

"Seven Little Sisters" and "Little Folks in other Lands" are assigned for the latter half of the year with the thought of leading on to more diverse and complex life as found in the various countries, yet utilizing only those which are simplest and so striking in general outline as to be easily apprehended and to leave a very definite impression. The study of dew, frost, light and heat, has proper relation to the physical conditions surrounding the Sisters and will have greater significance and permanent value from being utilized at proper points. The drawing, language and numbers can all borrow from the culture and science material for illustration and exemplification. Quite a number of selections in the second reader bear upon the work in other lines. Some of them have a strong culture element and due attention should be paid to them with reference to the content. That being mastered, proper and painstaking drill in oral reading should be given; for, however fashionable it may be to say that if the children have the thought they will give the right expression, the position is wholly untenable. They must be trained in vocal utterance and must have ideals set for them by teacher or by pupils who have a natural gift for thought expression. Some of the correlations which should be observed are "The Brown Bear" with habits of hibernation, "How a Butterfly Came" and "The Spider," with insect transformation. "Spring" with observations of renewed activity; "Willie's Carrier Pigeon" and "Robin's Visit" with re-appearance of the birds; "Coming and Going" with the migration of birds:

"The Drink for You" with the physiology work on food and drink; "Far-off Land" with effects of frost. There is not enough space here to speak of the cross references between the culture, nature and form studies in the report, nor does it seem necessary, as they are so fully indicated and are similar to those shown in the preceding article.

Cyr's second reader was specially named as supplementary because experience has shown it to contain matter peculiarly pleasing to children and a fine introduction to other study. The simple material of first year and much of that of second year do not demand any knowledge of the author; but in general, with children the personality of the author is a great force in their appreciation and enjoyment of literature. The story of the writer's life, his character, his personal appearance, all enhance the value of what he has written. It is more concrete, more real, it is not till a good degree of culture is attained in maturer years that the mind begins to measure what is written without the personality of the writer and never, perhaps, entirely divests itself of this element. The creator is greater than the creation. In the book named, Longfellow and Whittier, through the story of their lives, through their pictures, and their writings, come to be looked upon by the children as their personal friends and a beginning is made of appreciative interest in the beautiful characters of literary artists and these will influence character.

For the third year, the value of Fable and Folk Lore is still recognized, but there is a diminished proportion, its place being taken by an increased amount of historical material. Stories of discoveries and invention, of Thanksgiving, of Washington, of Lincoln, of Longfellow, Bryant and Whittier now fill the mind with the real things for which the mental craving begins to manifest itself. Quite a number of selections in the third reader are indicated as having special value. Not all of these have particular relation to the other work. The choice poems and myths and fables furnish culture material and will be taught with that thought in mind and not as mere exercise for ready recognition and facility in utterance of words. Those marked science can be used in connection with various nature work.

"The Little Raindrop" fits itself to the study of formation of cloud, "The Indian Mother's Story" to the study of light, "The Ant's Monday Dinner" to that of the ant, bee, etc., "Seeds" to the collecting of seeds, "Why People Eat" to the physiology work on food and drink, "Stories about the Parrot" to the observation of the return of the birds.

It is impossible to discuss here the material suggested for culture work either as to its intrinsic value in the child's development or as to its relation to the other lines. All other work will find it a fruitful source from which to draw. It seems to me that I find a defect in the course of study for this year in that no definite provision is made for the increase of geographical ideas in the minds of pupils. This has ample provision in the second year in Robinson Crusoe, Seven Little Sisters and Little Folks of Other Lands. Some work such as is planned in "Brooks and Brook Basins" and "How to Teach Geography" including attention to rocks and soils should be supplied.

In the fourth year, the geography idea is prominent as found in the study of grains, grasses, animal life, sun's slant, industries, besides that marked as specifically geography work. If the work planned has been properly done in the lower grades, pupils will be ready to do the more systematic work here proposed. The provision for excursions to observe various geographic forms and industries should not be slighted as there is much need of this. The study of plant and animal life is designed to be more scientific in treatment than heretofore, calling not only for closer observation but also for deeper thought and greater effort of reasoning. The most distinctive feature of the year's work is the study of the Mississippi valley. The way has been prepared by a true knowledge of geographic forms and a general knowledge of the main physical features of the North American continent. Now, the increased interest children manifest when dealing with particulars is utilized by a close study of the physical character of the region, the climate and its influence on vegetation and these upon occupations, intercourse, trade, etc., of the various sections. Beginning now at home and getting a clear idea of the topography and life about them, they go beyond to find the same repeated in enlarged

form with endless variety, their small streams mingling with larger, their hills and valleys replaced by larger ones skirting larger streams. To outline the work by rivers is probably the simplest, as these all constitute a connected whole and will be the threads by which the whole valley from Alleghanies to Rockies shall be brought into unity. There is real poetry in studying it thus which will by degrees impress pupils; and, while getting the geographic knowledge desired, they will get a degree of distinct culture. By and by the particulars having been gathered section by section, city by city, the children will take great delight in an imaginary journey along the great river. The culture material designed to accompany this work is Pioneer History Stories, showing the primitive life so different from the complex, social state of to-day. La Salle, George Rogers Clark, Daniel Boone, etc., will make the Mississippi, the Wabash, the hunting grounds of Kentucky full of life. The struggle against nature, against the wild Indians, against British occupation of the country, will typify the conflicts through which the early settlers passed in preparing the way for the civilization which now extends throughout the valley. The story of Evangeline may be used with excellent effect; the part describing her voyage along the Mississippi may be read and the incidents located so far as possible. Poetry, history, narration, description, science, all lend their aid in the work and make the study instinct with life in the place of dull routine of memorizing and repeating dead, hated facts for which pupils have no desire and no apparent use.

The third reader in this year also has selections which may be employed to reinforce the other work by the reading. In connection with animal life are the lessons on "Silk," "What Live on Flowers," "Eyes;" with the subject of birds' nests and eggs, the lesson on "Birds' Nests;" with physiology the ones on "Teeth," "The Hand," "What Animals Use for Hands;" with the industries the three on "Useful Metals;" with the study of flowers "Lily's Ball," "Jack-in-the pulpit," "Buttercups and Daisies," "The Discontented Buttercup." The history stories of "Washington," "Frederick Douglass" and the Christmas stories will find their natural place. The fables and myths will be utilized as occasion may suggest

and will be a means of intensified moral ideas. It should not be understood as necessary to proper correlation that the matter related should all be used entirely in connection. It may sometimes accomplish the purpose better to bring in so as to secure a review of ideas rather than to focus all upon a single point of time at the expense of all other considerations.

THE SCHOOL ROOM.

SPELLING.

A. COTREL DAVIS, HIGHLAND, CAL.

While teaching in the ungraded school no subject seemed so totally uninteresting and therefore so formidable as that of spelling.

For several years I tried the old class methods together with some original methods of conducting the work, ultimately proving each unavailable to adopt as a uniform method for the different grades.

But the embarrassment occasioned by these repeated attempts and successive failures only tended to incite a determination to solve the problem of presenting the work.

It may be explained and made comprehensive to any class during a single recitation. Ten words selected from the regular lesson will doubtless be enough, and should be written by the teacher on the board. Explain that certain words *may be* incorrectly written on the board, and if any such should be found, they should be correctly written on the slate. Then, explain that a significance will be given to certain signs and marks. (Any signs which may be readily understood may be employed.)

Following is a lesson of ten words used as an illustration:

(cut words into syllables)

- | | |
|-----------------------|------------------------------|
| 1. write ³ | (spell three ways.) |
| 2. cal e co | cal i co |
| 3. ver te bra+ | (spell plural) |
| 4. phe nom e na— | (spell singular) |
| 5. an ti lope | an te lope |
| 6. em u la tion= | (write a synonym) |
| 7. sur sin gle | sur cin gle |
| 8. peo ple+ (?) | (spell plural if it has one) |

9. little c (spell *compared* forms of adjectives and adverbs, and conjugated forms of verbs as the case may be.)

10. ap pa ra tus (mark diacritically)

The teacher should have a speller of his own in which he may in a very few minutes prepare the lessons for the few classes by indicating the work in lead pencil so that if the lesson be repeated different words may be selected readily. The varying of the lesson as presented by this method tends to secure a consideration of each word by each pupil, which result may not be secured by other methods.

SUGGESTIONS IN READING.

I. PREPARATION FOR THE READING LESSON.

Preparation of some kind is necessary to every well-taught lesson. To insure the best possible use of the time allotted to the subject, there must be a definite idea in the mind of the teacher of what is to be taught. Preparation is requisite, but if it be of the right sort, and done in the right way, it need occupy but very little time after the first teaching.

I wish to refer particularly, at this time, to preparation for the teaching of a phonic reading lesson. I have in my mind three teachers whose work I have frequently observed—all bright, clever and successful in their work, though there is no doubt as to which accomplishes most in the work of the session.

One has gone over the ground so often that she deems preparation unnecessary, and trusts to her memory, natural ingenuity, and "good fortune" to supply her with the right words and sentences for her lesson. This answers at times, but I have seen her lose a good part of the half-hour as she waited, chalk in hand, for the inspiration to come.

The second prepares her lessons, but on loose paper, and consigns them to the waste-basket at the end of the day, keeping no record of the work.

The third has what she calls her Phonic Book. It consists of a pad, about six by nine inches, fastened at one corner by a paper-fastener. A page is devoted to each letter or combination taught, and contains lists of words, sentences containing these words, and seat exercises based on the lesson. The book was made up one session some years ago, and has been

used ever since, though with many additions and improvements.

The majority of primary teachers keep an ordinary notebook for this purpose, but the pad is more convenient in many ways. There is no particular order of the letters, but the idea that should rule our selection is that of use. We teach the letters, but we expect the child to read first, in reading simple stories of familiar things. After once compiling a book of this kind very little time is required in preparing for the phonic reading lesson; and, of course, with regard to reviews it cannot be improved.

II. SUPPLEMENTARY READING.

In most classes the children are furnished with only one reading book. In many cases it would be unjust to ask the parents to provide others, and useless to ask the Board of Trustees to supply them. That supplementary reading is very desirable no one will deny. When a child has read through his book what is he to do? The next book is perhaps, at that time, too difficult, and he becomes discouraged. What he needs is another book of the same degree of hardness. Some of the children may be slow, and the teacher considers a review necessary. In this case there is no doubt but that, if they had new lessons containing the difficult words, they would take a great deal more interest in them than in merely going over the old ground. My opinion is that we cannot have too much supplementary reading. There is nothing like it for making good readers. Indeed, so eager do the children become for reading that it is not always easy to get sufficient material.

Old books that the children may have can be used. Select suitable stories, cut them out and mount on pasteboard or heavy brown paper. Children's papers, Sunday-school magazines, and the "Young Folks' Corner" in the weekly papers supply others. A better style of supplementary reading is that made by the teacher herself. When a lesson is reached in the book containing a number of unphonetic and difficult words, it is a good plan to write out on slips of pasteboard, or the backs of business cards (make the picture on the card supply the text), sentences containing these words in the form of a short story. Collect the business cards that the children

may get at the fall fairs, and use them for this purpose. You will find it an excellent plan.

However, the supplementary reading that stands ahead of all is the stories the children themselves write. When they are sufficiently advanced, and are writing stories from pictures, reproducing anecdotes, etc., select the best ones, have them rewritten as carefully as possible, and kept for reading material. Children learn to read by reading, and when they know the powers of the letters they will go right on, and will read all you can supply them.—*Rhoda Lee in Educational Journal.*

DEPARTMENT OF PEDAGOGY.

Conducted by ARNOLD TOMPKINS, Chair of Pedagogy, University of Illinois, at Champaign.]

OUTLINE OF THE TEACHING PROCESS.

SUPT. L. H. JONES, CLEVELAND, OHIO.

I take the liberty of publishing the following outline of the teaching process, enclosed to me in a letter from Supt. Jones. The teachers of Indiana have been studying the teaching process, and I am sure will be interested in a statement which shows the great complexity of the process in unity better, I think, than anything yet published. It maps the whole field and keeps the parts in the unity of a single view. It furnishes a guide for a life-long study of pedagogy, preventing one from getting lost in the wilderness.

"In order to show how it is that the whole nature or essence of the school is merged into the teaching act, and how it is strictly unified through the teaching principle it is necessary to make a clean analysis of the teaching act itself. I consider the power to make this analysis, more or less consciously, the test of the thoughtful teacher as compared to the mechanical teacher who moves through processes in a dull round of unexplained activities. I readily grant that many good teachers are unable thus to analyze the very processes which by native grace they can perform so well; but it is also true that native grace of this kind is like the delicate down of the peach - easily rubbed off and not to be replaced by any me-

chanical device. The only resource therefore for continued power that shall not become mechanical in its application in teaching is the continued brooding over the deeper principles of teaching as a science, that the results shall be consciously applied in teaching as an art.

"The teaching act, as I contemplate it here, is that accomplished by a thoughtful teacher upon the thoughtful pupil as a member of the school; and does not at all refer to incidental processes of instruction as induced by other agencies.

"It is significant at the beginning that it is impossible to conceive rightly the teaching act by contemplating the teacher alone. The act is organic, and reaches out in its every element and makes connection with the mind of the learner. Otherwise it is no teaching act. Hence the constant reference to pupil as well as teacher in analyzing the teaching act, precisely as the analysis of the learning act compels constant reference to teacher as well as pupil.

"The teaching act or process as I shall describe it, then, has three stages and five elements—or if put under the language of the dramatic art it will be proper to say that each act of teaching, brief as it may be in time, is really a drama of three acts with five scenes in each act. I designate the acts as preliminary, preparatory and actual phases of the teaching process.

"PRELIMINARY:—1. Study of the nature and destiny of the human being. Psychology, ethics, metaphysics, etc.

"2. In view of this nature and destiny the setting up of an aim or purpose of education. Professional ethics. The establishment of ideals in education, including a study of the principles and progress of civilization.

"3. The study of the nature of knowledge as the instrumentality by which the development of the human being may be carried out in accordance with this aim. This is the teacher's professional study of subjects.

"4. Selections of the portions of knowledge best adapted to this end and apportioning it to ages and stages of development and other governing causes—making a course of study.

"5. The general study of the means of bringing about the contact between the knowledge stimuli and the developing

mind in harmony with the principles enumerated above.
Study of methods.

"PREPARATORY:—1. Thinking into form the matter to be presented, i. e., relating the several parts to one another in the order of their easy and correct mastery by the pupil in preference to their logical relations in the subject, whenever there is a difference in this respect.

"2. Determining the special ethical outcome of teaching of this particular lesson—i. e., the part that it should perform in the life-developing process which shall in the end attain the aim of education in these pupils.

"3. Thinking together or into a coherent group the apperceiving ideas which the child possesses from previous lessons, or from life, but which must needs be clearly in consciousness as a means of interpreting a new lesson.

"4. Planning the agencies which will cause the pupils to revive in consciousness the necessary apperceiving ideas.

"5. Planning agencies which will cause the pupil to take the necessary mental steps to master the new knowledge.

"ACTUAL TEACHING PROCESS:—1. Setting agencies to work to cause the pupil to recall the necessary apperceiving ideas, to feel a predisposition toward the subject matter of the lesson, and to make the necessary resolves for its mastery.

"2. Thinking these apperceiving ideas as pupils recall them (representative thinking on the part of both) and thinking the degree of success which the pupil is making (original each time with the teacher) and marking the degree of success which will suffice for the mastery of the new matter, appreciating the feeling of predisposition as fast as it rises in the mind of the pupils, and noting the degree of resolution or volition developed.

"3. Setting agencies to work to cause the pupils to think the thoughts of the new lesson and feel such feelings as are appropriate, and make such resolves as are a natural outgrowth of the exercise.

"4. Thinking the new thoughts with the pupils, (representative thinking for the teacher—original with the pupils), and thinking the degree of success of the pupil step by step, (original each time with the teacher) ending at last in marking the degree of success which is considered sufficient for

mastery; feeling the appropriate feelings with the pupils, (representative on the part of the teacher) same with volition.

5. Judging the degree in which the ethical aim of education has been advanced in the pupil by the lesson.

It seems necessary to put over against this a similar analysis of the act of learning. This is a drama of a simple plot, consisting of two acts and one scene in each. The act of learning as distinguished from the act of teaching.

PREPARATORY:—Responding to the stimulus of the teacher's thinking (feeling and volition) by recalling into consciousness the necessary interpreting ideas, in feeling the predisposing feelings, and in making the necessary volitional adjustment to the new theme.

ACTUAL PROCESS:—Responding to the stimulus of the teacher's thinking (feeling and willing) in taking the necessary steps in thinking to master the new theme, in feeling the feelings appropriate to this mastery, and in making these decisions (more or less conspicuously) which the mastery of the new theme leads him to make, i. e., realizing a new condition of himself as the outgrowth of the act of mastering the new theme.

I have made the analysis chiefly for the purpose of being able to say more forcefully than otherwise that to give chief attention to the intellectual elements in the act of teaching or learning is to miss its essential elements. Things are sometimes necessary that are not essential, i. e., not of the essence or higher nature of the thing. To get through the form of teaching without having prepared the intellect by rousing a predisposing feeling and a heroic resolve is to act an intellectual farce; while to end a teaching act without having left the mind of the learner predisposed to search for truth is to trifle with sacred things.

One more single point enables me to make the application I desire. I have nowhere indicated any element of training as a part of teaching. I have omitted it simply because it is one of the inseparable accompaniments of every element of every act; and becomes of paramount importance when the teaching respects morality or the principles of conduct, which realize themselves fully in external action. Involving in this way, then, training into facility of action as an essential ac-

companiment and condition of every teaching act you will readily see that the teaching process holds within it the essentials of school management even in its details. Method grows out of chaos here if we but consider that the school is not satisfied with the external order as is the state but seeks in its own province to teach and enforce the principles of conduct till they shall become an inner court of last appeal, precluding not alone the outward act, but even the love and contemplation of evil. The child becomes himself a being of inherent worth."

EXAMINATIONS IN FRANCE.

JENNIE S. TOMPKINS.

The question of examinations seems to be as great a source of annoyance to the boys and girls in the schools of France as it is to the pupils in some of our own schools. From an article in a late number of *La Revue de Paris*, which is too long to give in full, the following abstracts are taken.

The writer says, in speaking of the examinations, that he, in company with the vicar, visited a church and while there a nun, who had brought with her three little girls, stopped before them. He learned by her conversation with the vicar that the children were going, in a few days, to present themselves at an examination for a certificate in their studies. The good sister was so anxious about them that she could not sleep. She said the little girls, though, had worked very hard, even too hard; that four should have come, but one was taken sick, which was very unfortunate, because she was the best prepared, and the examinations were very difficult. Every evening pupils and teacher had gone to ask of the Virgin Saint her protection in this great trial.

In another church about twenty little girls and some sisters were kneeling and praying very earnestly. The nuns, recognizing the Bishop, arose, and one of them told him that those children were going to present themselves at the examination, and she asked the Bishop for his benediction, which he gave. The writer says he could not keep from thinking that these creatures, if they were not prevented, would enrich

some new chapter in the book on the "Miracles de Notre Dame." Yet after all, the meditative countenances of the little girls, the gravity and business look of the nuns, the intervention implored of heaven by these poor souls gave him an idea of the extraordinary power exerted in this day by the examination and the examiner.

He says everybody in France is examined; little girls and little boys—candidates for the certificates of primary studies; lads and lasses—candidates for the certificates of upper primary studies; young men and young women—candidates for the primary normal schools, for the simple and superior "brevets"; an enormous troop of candidates for the bachelor's degree, and an ever-increasing crowd of candidates for the licentiates and for the fellowships in the great schools—the old ones, polytechnic, Saint-Cyr, naval, normal, central; also for the new ones, Fontenay, Sevres, Saint-Cloud, agricultural, commercial and colonial. The number of candidates for both the old and new schools is constantly increasing.

It used to be that the young men would go straight to some industry, but now since the law dispenses with two years of military service in exchange for a diploma, there is scarcely any one who does not aspire to a diploma; and the examiner who judges, classes and distributes the right to live, becomes a very important personage. He receives more entreaties than a deputy or a minister. In vain he tries to steal away—he is discovered, implored, supplicated. It is not only the little girls and the good sisters who make applications to the Power on high, in order that they may influence the judge, but fathers in the pulpit have been heard to tell how they succeeded in obtaining the baccalaureate degree by intercession. In the chapel of the Sorbonne, some slates of marble with inscriptions in letters of gold are the thank-offerings of mothers for diplomas.

The inevitable effect of this importance of the examination is that it becomes the teacher and regulator of the studies and of the intelligence; not only the examination but the examiner. The best chance of success is to the one who knows best the time, the program and the judge. This accounts for the examination rooms being filled with young men and young women who are going to be examined the next year. They

come to see how the examiners question. They are very attentive auditors, taking notes in note-books, which are representatives of little professional journals. They write down the questions and after a few sessions they are acquainted with the habits of the examiner. They hold to this man, and their preparer, or tutor, knows the necessary way of preparing them. The studies in themselves are not considered as having any value. They are valued only as a means of securing the diplomas.

To make the habits of the examiner a method of instruction must certainly be a very great humiliation. Then there are so many examiners in the same subjects and they do not all have the same habits and the same ideas. The preparer who knows the habits of all will, therefore, say to the candidate, "If you have the examination under Mr. X you must be able to say it this way, but if the examination is under Mr. Y, look out! for he does not think that way."

The writer gives a description of, and criticises very severely a number of examinations in the various branches. The tests are both oral and written. He says one test in composition is to write from dictation a page of some author; then the spelling, punctuation, etc., are marked. This he thinks a very unjust test, for the same writer might not punctuate the same piece of discourse the same way twice. That punctuation is effected by the nerves and that difficult grammatical constructions often have more than one explanation, and the one most suitable for the day may not be the one the author intended.

He says, "Suppose the dictation be a page of Bossuet or Rousseau or Chateaubriand and that the manuscript of the author should be slipped among the copies, it would be vexatious if the rigorous application of the marking should refuse to either of these men the "elementary brevet."

A list of subjects for composition work is given. The subjects are abstract discussions of questions of which the candidates have had no personal experience. The subjects are anticipated and prepared for. The teachers give the children the plans, the frame-work, and some trite expressions for the filling in—some stereotyped phrases; these are put together end to end; which is a very bad business.

The samples of questions in the other branches are very much like those we have often heard in our own schools—simply memory tests, such as: Where does the Garonne rise? Who was born at Saint Malo? Where are the Little Antilles? Who owns them? This is the style of questioning.

LEND A HAND.

(This department is conducted by Mrs. E. E. Olcott.)

“Look up and not down
Look forward and not back
Look out and not in;
Lend a hand.”

FACTORING BY INSPECTION.

A golden secret in school work is to make, as far as possible, each thing learned “lend a hand” to other things that are to be learned. When the six-year-old discovers that 8 is made by taking four things two times, he has begun factoring. By and by, he writes the abstract expression, $8 = 2 \times 4$. A little older grown he may say intelligently, “2 and 4 are *factors* of 8,” thus becoming familiar with a term he will need in higher grades. Then a teacher with foresight may ask, “Can there be more than two factors in 8?” and by skillful questions lead the pupil to substitute 2×2 for 4 and so change $8 = 2 \times 4$, to $8 = 2 \times 2 \times 2$. Then a natural question is “What other numbers have more than two factors?” By testing, the pupil rejects 9, 10, 11 but notes 12, and proudly says and writes:

$$\begin{array}{ll} 12 = 2 \times 6 & \text{therefore } 12 = 2 \times 2 \times 3; \text{ also} \\ 12 = 4 \times 3 & \quad \quad \quad 12 = 2 \times 2 \times 3. \end{array}$$

He discovers that in each case the factors are a three and two 2's. Continuing his investigation he finds four factors in 16. He is given the thought *prime* factor, because it will be a helping hand when he is ready for work with the greatest common divisor and least common multiple. As he learns the multiplication table he also learns the prime factors of the numbers. He says $8 \times 8 = 64$, he is able to readily say also $64 = 2 \times 2 \times 2 \times 2 \times 2 \times 2$.

By the time he has completed the multiplication tables, he should be able to name from memory the prime numbers

between 1 and 144; and to mentally resolve any composite number less than 144 into its prime factors.

A good general rule for finding the prime factors of a number is, Resolve the number into two as nearly equal factors as possible. If either or both of these factors are composite, resolve them into their prime factors. The prime factors thus found will be the prime factors of the original number.

Find by inspection the prime factors of 132. The pupil thinks " $132 = 11 \times 12 = 11 \times 3 \times 2 \times 2$." He learned long ago that 11 is a prime number and that $12 = 3 \times 2 \times 2$, and that "lends a hand" now and makes easy the factoring of large numbers. Soon he grows strong enough to so apply his knowledge that he is able to *mentally* factor numbers expressed by four and even more figures.

When the number is too large to be handled mentally, instead of "dividing by the least prime factor," he uses the largest divisor, composite or prime, that suggests itself. If the number does not end in 1, 3, 5, 7, or 9, he tries 12 as a divisor because he can divide by it mentally, trying smaller numbers if need be. If the quotient resulting from the first division is still too large to factor by inspection, he divides again by some exact divisor. When the quotient is small enough to factor by sight, he resolves it and the divisors into their prime factors as he has been accustomed, thus *making the best use of his previous knowledge.*

Find the prime factors of 1728.

$$\begin{array}{ll} 1728 \div 12 & 12 = 3 \times 2 \times 2 \\ 144 & 144 = 3 \times 2 \times 2 \times 3 \times 2 \times 2 \end{array}$$

Both mental development and economy of time recommend this method. It is not urged that the factoring of large numbers be begun earlier than is customary, but only that pupils be prepared for it so that when the time comes for such work, finding prime factors, the G. C. D. and L. C. M., seem to the pupils merely a continuation of familiar processes.

THE GREATEST COMMON DIVISOR.

Find the G. C. D. of 100 and 360.

A pupil trained to factor by inspection has learned to use the knowledge that ten is always a factor of a number ending in naught. The numbers become to him 10×10 and 10×36 . He *knows* the prime factors of 10 and 36. If he is strong

enough, he can ascertain the G. C. D. mentally. If he needs a little help from a pencil, he writes,

$$100 \dots 2, 5, \quad 2, 5.$$

$$360 \dots 2, 5, \quad 2, 3, \quad 2, 3.$$

$$3, 2, 5, = \text{common factors } 20 = \text{G. C. D.}$$

Find G. C. D. of 542, 1084 and 1626.—The first step the wise pupil takes is to ascertain whether the smallest number given is a divisor of the others, and consequently the G. C. D. sought. In the problem above, he is rewarded by noting that 542 exactly divides 1084 and 1626. So the G. C. D. is learned in a few seconds by forethought and inspection.

Find the G. C. D. of 720, 968 and 1368.—Inspection reveals that 720 is not the G. C. D. in this problem. So the next step is to factor it.

$$720 = 10 \times 9 \times 8 \dots 5, 2, \quad 3, 3, \quad 2, 2, 2$$

$$968 = 8 \times 121 \dots 11, 11, \quad 2, 2, 2$$

Since 2, 2, 2 are the only common factors, 8 is the G. C. D. sought if 2 is found three times as a factor in 1368.

$$1368 | 12$$

$$114 | 6$$

$$19$$

$$1368 = 12 \times 6 \times 19 \dots 3, 2, 2, \quad 2, 3, \quad 19$$

Since 2, 2, 2 is found in each number, 8 is the G. C. D.

THE LEAST COMMON MULTIPLE.

The pupil finds the L. C. M. just the same old theme with a variation. If the largest number contains the others, it is the L. C. M. desired. So he tests that point first. If it will not contain the smaller numbers exactly, he factors as of old.

Find the L. C. M. of 360, 180 and 120.—Applying the test of dividing the largest number by the others, he finds at once that 360 is the L. C. M.

The pupil has been shown that a L. C. M. must contain all of the different prime factors found in the numbers whose L. C. M. is sought. And it must contain each factor as many times as it is found in any one of those numbers. So he factors the largest number first, and by its prime factors writes the different prime factors that he finds in the other numbers; also, any common prime factors that occur more

times in a smaller number than in the largest; being very careful that each factor shall appear as many times as is required.

Find the L. C. M. of 680, 624 and 548.

$$\text{L. C. M.} = (5 \times 2 \times 2 \times 2 \times 17) \times (2 \times 3 \times 13) \times 137.$$

$$680 = 10 \times 68 = 10 \times 4 \times 17 = 5 \times 2 \times 2 \times 2 \times 17.$$

$$624 = 8 \times 78 = 8 \times 6 \times 13 = 2 \times 2 \times 2 \times 2 \times 3 \times 13.$$

$$548 = 4 \times 137 = 2 \times 2 \times 137.$$

The parentheses simply indicate the factors taken from each number and make corrections easier.

DESK-WORK.—NUMBERS.

I.

1. Write all the prime numbers between 1 and 200.
2. Write the numbers between 1 and 100 that have more than two prime factors.
3. How many have more than three prime factors?
4. Which number has the most prime factors?
5. Factor by inspection 144, 121, 100, 81, 64, 49, 36, 25 and 16.

NOTE: The written work for those beginning may be arranged something as follows:

$$144 = 12 \times 12 = 3 \times 2 \times 2 \times 3 \times 2 \times 2 = 3 \times 3 \times 2 \times 2 \times 2 \times 2.$$

$$121 = 11 \times 11 = 11 \times 11.$$

$$100 = 10 \times 10 = 5 \times 2 \times 5 \times 2 = 5 \times 5 \times 2 \times 2.$$

$$81 = 9 \times 9 = 3 \times 3 \times 3 \times 3.$$

II.

1. Find the G. C. D. of 360, 484 and 684.
2. Mr. E divided his three farms of 324 acres, 486 acres, and 4293 acres respectively, into tracts of equal size: how many acres in each tract?
3. Mr. Jones shipped by rail in equal car-loads four lots of wood, the first containing 84, the second 96, the third 108, and the fourth 120 cords; how many cords in each car-load, the loads being the largest possible?

SOLUTIONS.

1.

$$360 = 10 \times 36 = 2 \times 5 \times 3 \times 2 \times 3 \times 2 = 2 \times 2 \times 2 \times 3 \times 3 \times 5.$$

$$484 = 4 \times 121 = 2 \times 2 \times 11 \times 11 = 2 \times 2 \times 11 \times 11.$$

$$684 = 12 \times 57 = 2 \times 2 \times 3 \times 3 \times 19 = 2 \times 2 \times 3 \times 3 \times 19.$$

Common factors 2, 2.

4 = G. C. D.

2.

$$324 = 6 \times 54 = 6 \times 6 \times 9 = \underline{3 \times 2} \times \underline{3 \times 2} \times \underline{3 \times 3} = 2 \times 2 \times 3 \times 3 \times 3 \times 3.$$

$$486 = 6 \times 81 = 6 \times 9 \times 9 = 3 \times 2 \times 3 \times 3 \times 3 \times 3 = 2 \times 3 \times 3 \times 3 \times 3 \times 3.$$

$$4293 = 9 \times 477 = 9 \times 9 \times 53 = 53 \times 3 \times 3 \times 3 \times 3.$$

Common factors 3, 3, 3, 3.

81 acres in each tract.

3.

$$84 = 12 \times 7.$$

$$96 = 12 \times 8.$$

$$108 = 12 \times 9.$$

$$120 = 12 \times 10.$$

12 is so evidently the G. C. D. that there is no need to find prime factors. 12 cords in each car-load.

NOTE: Pupils may be led to *partly* factor the numbers first so as to take advantage of chance relations of numbers as in problem 3.

III.

1. Find the L. C. M. of 564, 528 and 432.
2. What is the least debt that can be paid with either 3-cent pieces, 5-cent pieces, 10-cent pieces, 25-cent pieces, or 50-cent pieces?

SOLUTIONS.

1.

$$\text{L. C. M. } (2 \times 2 \times 3 \times 47) \times (2 \times 2 \times 11) \times (3 \times 3) = 564 \times 44 \times 9.$$

$$564 = 12 \times 47.$$

$$528 = 12 \times 44 = 12 \times 2 \times 2 \times 11.$$

$$432 = 12 \times 36 = 12 \times 2 \times 2 \times 3 \times 3.$$

$$223,344 = \text{L. C. M.}$$

NOTE: To economize time always multiply the largest number given by the necessary factors from the other numbers.

For convenience the L. C. M. may be indicated at the beginning of the solution, for the factors of the largest number may be written first, then the other factors as they are ascertained.

2.

$$50 \quad 25 \quad 10 \quad 5 \quad 3.$$

Inspection shows that 25, 10 and 5 are exact divisors of 50, and, therefore, may be disregarded, 50 and 3 have no common factors hence 50×3 is the number required. 150 cents or \$1.50 can be paid.

PRIMARY DEPARTMENT.

Edited by MRS. SARAH E. TARNEY-CAMPBELL, Supervisor of Instruction in the
Anderson Schools.

THE SECRET.

We have a secret, just we three,
The robin and I and the sweet cherry tree;
The bird told the tree, and the tree told me,
And nobody knows it but just we three.

But of course the robin knows it best,
Because he built the—I shan't tell the rest;
And laid the four little—somethings in it—
I am afraid I shall tell it every minute.

But if the tree and the robins don't peep,
I'll try my best the secret to keep:
Though I know when the little birds fly about,
Then the whole secret will be out.

—*Little Flower Folks.*

ADVICE TO THE CROCUS.

Miss Crocus, I know if I were you
I would not wake in the cold;
You shine so when bleak winds blow,
Shaking your bells of gold.

Now just keep down in your beds so brown,
Till Spring is really here,
And bees shall come with merry hum,
And frost you need not fear.

For I am sad when I should be glad
To see you all in a row,—
Purple, and white, and yellow bright,
You sweetest flowers I know.

Since cold, cold rain will come again,
Beating your tender heads,
Since Spring is late, please, Crocus, wait
Snug in your little beds.

Then if you're wise, you'll ope your eyes
When blackbirds come to sing;
When grass, you know, begins to grow,
Then really comes the Spring.

—*Little Flower Folks.*

SUPPLEMENTARY PRIMARY READING.

In reading work based upon biography and science, it is frequently well to have a sort of preliminary talk on the person or thing which is to be the subject of the lessons. After this is done the children may tell the teacher the things they have discovered in the object or something they were especially interested in, in the man. These are put on the the board (in print or script) at the time and each story read just as soon as it is on the board. Sometimes after this preliminary, without any suggestions from the children, the teacher puts the stories on the board and they read them, not knowing at all what may be thought in each particular sentence.

Many of the new words, especially if they happen to be long or unusual, the teacher tells the children without any attempt to work out the pronunciation by phonics. In the lessons on Longfellow, the teacher told the children the entire name as she pointed it out, Henry W. Longfellow; she also told them the words, Hiawatha, Allegra, Edith, fore-head, atmosphere, blacksmith, branches, Nokomis, animals and squirrels.

The short and more common words were worked out phonetically. One of these was swim. They know the sounds of *s*, *w* and *m*. They had found often before, that one letter only after *i*, usually helps it to say *y*. So they determined for themselves the pronunciation of several words, among them were swim, when, named, middle, right, between and dark.

In order that the children may be able to work out pronunciations, the teacher has almost daily a lesson in phonics. In this line of work, the children learn the sounds for which most of the consonants stand. They learn that an *e* after *c* and *g* help these letters to give their soft sounds. They know that *o*, *u*, *l* and *r* after *c* and *g* help them to give (or indicate) their hard sounds.

There are many things to be learned about the vowels. But one of the first is that *a*, *e*, *i*, *o*, and *u* have their short or name sounds (usually) when there is only one letter after them, and have their long sounds when there is a silent final *e*.

They also learn what are called *families*, as, the *all* family (ball, tall, call, etc.). Then the *ound*, *ice*, *ee*, *igh* (night, sight, light, etc., etc.) and *ay* families are studied. This knowledge makes the child able to master very many of the new words used with very little assistance from the teacher.

Then, too, the lessons must be gone over very carefully at the time and frequently reviewed. No matter how common a word may be, the child must see it frequently and associate it with its meaning in order really to master the word. This fact makes the careful teacher prepare for frequent reviews. In these, she occasionally weaves new stories from old words alone; sometimes she introduces only a word or two that may be new. This kind of review is far better than simply going over the lessons as they were first read. It has the element of fresh interest and that other essential in all work with children—drill, drill, drill. The point is so to disguise the drill that it is not recognized as such. The teacher might almost as well not do the work at all as to give so little attention afterward to the work already done that the pupil forgets it.

A very helpful thing in this kind of reading work is a copying pad or hektograph. With one of these a teacher can print enough lessons for an entire class in a few minutes. The recipe herewith given is taken from the *Primary Education* and has been found very successful.

RECIPE FOR HEKTOGRAPH.

4 oz. white glue.

12 oz. glycerine.

A few drops carbolic acid.

Cover glue with water, leave on stove until dissolved. Put glycerine in another vessel until hot. Put the two together; set vessel in hot water, boil five or ten minutes, stir, and pour in shallow, flat pan, being careful to avoid bubbles.

Use a glue-pot, oatmeal-boiler, or other double boiler to avoid burning.

This has no odor.

The wise teacher will not present a subject in more than one way, unless he has failed in the first way.

PRIMARY READING.—HENRY W. LONGFELLOW.

I.

Do you see this house?

A little baby was born in this house.

His name was Henry W. Longfellow.

He was a pretty baby.



He had blue eyes.

He had brown hair.

Little Henry could coo and laugh.

When he became a boy he played like other boys. He could swim. He liked to fly kites. He could run and jump.

He went to school when he was three years old.

II.

This is Mr. Longfellow's picture.

He looks like an old man. His hair is soft and white.

Mr. Longfellow had three little girls.

One was named Alice.

One was named Allegra.

One was named Edith.

Alice was a grave little girl.

Allegra laughed very much.

Edith had golden hair. Her papa said of her:



Henry W. Longfellow

"There was a little girl
That had a little curl,
Right in the middle of her forehead;
When she was good
She was very good,
But when she was bad she was horrid."

III.

Mr. Longfellow liked children.

He played with his children.

He wrote a poem about their play-time. [It is "The Children's Hour."

Their hour for play was in the evening—"Between the dark and the daylight."

They would slip into his study.

They would climb upon his chair.
They would smother him with kisses.
Many children came to see Mr. Longfellow.
He told them pretty stories.
He liked to have them come. He said:

"Come to me, O, ye children,
And whisper in my ear,
What the birds and the flowers are singing
In your sunny atmosphere."

IV.

Mr. Longfellow was a poet.
Do you know what a poet is?
He wrote a poem about "A Village Blacksmith." A blacksmith works with iron.

The shop was under a chestnut tree. The tree had spreading branches.

The blacksmith had long, black hair.
He was a strong man. He was an honest man.
He went to church on Sunday.
His little girl sang in the choir.
He liked to hear her sing.

V.

Did you ever have a present?

Mr. Longfellow got a present on his birthday. It was an arm-chair.

The school children gave it to him.

They had it made.

Where do you think they got the wood?

The chestnut tree had been cut down.

The wood was saved. The chair was made of this wood.

They put the chair in Mr. Longfellow's study. He was pleased.

He wrote a poem to the children, thanking them for their nice present.

Ask your mamma to read the poem to you.

VI.

Did you ever see an Indian?

Mr. Longfellow wrote about a little Indian boy.

His name was Hiawatha.

His mother was dead.
He lived with his grandmother Nokomis.
They lived in a wigwam.
Nokomis told Hiawatha many things.
She told him about the moon.
She told him about the rainbow.
Hiawatha knew all the birds.
He knew all the animals.
He had a bow and arrow.
The birds said, "Don't shoot us, Hiawatha."
The squirrels said, "Don't shoot us, Hiawatha."
He was kind to the birds and squirrels.
When I am older I will read Mr. Longfellow's poems.
They will make me better.

LORETTA BROWN, Anderson, Ind.

This series of lessons on Longfellow is arranged for a class of children not yet quite ready for the second year of school work. The material here prepared is sufficient for the main part of the reading for an entire week.

In connection with the first lesson the picture of Longfellow's old home should be shown to the class. It is better still to put it on the board. Many a teacher who is sure she cannot draw will surprise herself to find how well she can do with what she supposed to be little or no ability at all. A suggestion was made to a primary teacher that in connection with George Washington she copy on the board the picture of his early home, a small copy of which she had on her table. Although it was the first attempt at copying such a picture, the result was more than satisfactory both from the drawing itself (which she found she could do tolerably well) and from the additional interest the children took in Washington.

In the second lesson, the picture of Longfellow himself should be shown the children. This may also be put on the blackboard. In the fourth, the picture of a blacksmith may be given. With the fifth, the arm-chair presented him on his birthday and in connection with the sixth, pictures of an Indian, a wigwam, and bow and arrow are to be shown.

In connection with this series of lessons the teacher read

"The Village Blacksmith" and the children were encouraged to make drawings illustrating the following points:

"Under a spreading chestnut tree,
A village smithy stands."

"The smith a mighty man is he."

"Children look in at the open door."

"He goes on Sunday to the church."

"He hears his daughter's voice
Singing in the choir."

For a part of their busy work, the children made out of the letter cards the stories they had in the reading lesson; they made new stories or put those they had had in a new way; occasionally they wrote two or three stories on their slates. The children were given pegs and asked to make on their desks a picture for the first, third and fourth subjects the teacher selected for their drawing.

The spelling is reinforced by the occasional writing on the slates and the making of stories out of the letter cards.

No teacher may find this series of lessons exactly suited to her particular class, but such lessons are capable of great variation. Then, too, these are only suggestive of what may be done with any biography which the teacher wishes to teach, even if the children are very small.

This teacher has read and told to her little first-year pupils the story of Hiawatha as given in the poem. Of course she had to omit parts of the poem and to simplify the language of a great deal of it. But there are many parts she read to the children exactly as written.

The teacher who has never taken such subjects as these for the reading will feel sure there are so many long, difficult words that the children cannot learn them. But the objections vanish as soon as a thorough test of such work is made. Children will learn the word form *Hiawatha* just as readily as the word form *boy*. From the standpoint of real interest in the lesson, the kind of lessons here given are so far above an ordinary little reading lesson in which words are taught in an isolated way that no teacher would go back to the purely "word" method after once trying this.

EDITORIAL.

Do NOT forget that May 4 is the centennial anniversary of the birth of Horace Mann, the greatest educator this country has ever produced.

ESPECIAL attention is called to the character of the articles given in this issue of the JOURNAL. Several of them are of more than ordinary merit. Do not fail to read them.

PRESIDENT ANGELL, of the University of Michigan, has announced that hereafter in choosing members of the faculty at Ann Arbor, no discrimination will be made between men and women. If a woman is better qualified, the preference will be given her.—*Ex.*

Remarkable!! Horace Mann did that at Antioch College more than forty years ago, and he paid the women the same salaries that he paid men, too.

NATIONAL EDUCATIONAL ASSOCIATION.—The next meeting of this body will be held in Buffalo, N. Y., beginning July 7. Do not forget the date, and make arrangements to go. President Daugherty writes that the programs are being rapidly completed and that they will be good ones. Supt. Henry P. Emerson, of Buffalo, is chairman of the local committee and is ready to answer all questions in regard to hotels, etc.

COUNTY SCHOOL BOARDS act wisely when they decide, after careful consideration, upon what they will buy for the schools. The individual members should buy nothing that has not been acted on by the Board and its merits and price fixed. It is not always necessary that every trustee should buy everything approved by the Board, but it is essential that he should buy nothing that has not been approved. This course would save the state thousands of dollars spent every year by trustees for apparatus and appliances that are comparatively useless.

JUST THINK OF IT.—A person who had neglected to send his pay for the JOURNAL until after he had received a "reminder," not only sent what was due, but enclosed a stamp to cover the expense of sending the "reminder." This incident is given, not with any hope or expectation that it will ever be repeated, but simply to call attention to the fact that "many a little makes a mickle." If all the persons to whom "reminders" are sent should "go and do likewise," the JOURNAL would save more than a *hundred dollars* every year. And yet, and yet—and yet some persons will wait for a "second notice."

THE National Normal, at Lebanon, O., will not change its location as reported. Recently while at Muncie the writer was told that the "Holbrook Normal" was to remove to that place, that a representative of the normal had been there, had chosen a site for the new building, had agreed upon the details, &c., and that the papers had been drawn and signed. In order to get at more facts a letter was written to Lebanon and an answer comes that Josiah Holbrook, the man who signed the papers had no authority for doing so, and further that the

school has no intention of moving. On the other hand it has recently let contracts for extensive improvements. A newspaper just received from Chattanooga, Tenn., charges that Josiah Holbrook has been there and has agreed to move the normal to that point, and that he had previously agreed to locate it at Knoxville, Tenn. So it seems that Josiah is in the locating business.

THAT Reading Circle Book again. Taking what the *N. Y. School Journal* said as true, other educational papers have been criticising our Reading Circle Board. One of them says: "It does seem as if a Teachers' Reading Circle is getting a little away from its legitimate work when it adopts 'The Great Stone Face' and the 'Holy Grail' as a part of a course of reading. No doubt the reading of these books will greatly benefit the teachers and so they would doctors and lawyers." Dear friends, please withhold your criticisms till you can know what you are talking about. For the benefit of those who are so much interested, the JOURNAL will say again that the book criticised is to be a book on "Methods in Reading" Preceding these selections will be an introduction of probably fifty pages on the nature of literature, which will serve as a basis for the analysis of the selections. The analysis will be made in such a way as to make it a guide to the reading and study of literature. These pieces of literature will be used to illustrate how all advanced reading should be taught. How can teachers be more effectually helped and what can be more *professional*? If our critics only knew what the Board has in mind and knew Arnold Tompkins, who is to do the work, they would remain silent till they see the book.

LELAND STANFORD, JR., UNIVERSITY.

THE educational people of the entire country will rejoice to know that the Supreme Court of the United States has decided the great law suit in favor of Mrs. Stanford, and this means in favor of Stanford University. The amount involved was over \$15,000,000, and had the decision been the other way the most of this would have come out of the endowment of Stanford University. This would have crippled if not entirely ruined the institution. It is well known that most of the endowment of the Stanford University consists in rich California lands given by Mr. Stanford. The suit brought by the government against Mr. Stanford's executors was for the purpose of making him individually liable for the action as a stock holder of the Central Pacific Railway Company. Had the suit been successful the government would have been but little richer and the educational interests of the country immensely poorer. It is as it should be.

INDIANAPOLIS UNIVERSITY.

A new "university" has been organized—on paper at least. It is an association of colleges already operating at the Capital city. Butler College, in the suburbs of the city, the Indiana Medical College, the

Indiana Dental College and the Indianapolis Law School are the institutions associated.

Representatives of these schools, together with other leading citizens of Indianapolis, have had several conferences and have finally agreed upon a form of organization whereby these institutions will hereafter be known as departments of the Indianapolis University.

No change will be made in the local management of any of the schools and each will provide its own money and its own teachers as of yore. The officers of the University will be made up of representatives of the different schools. This University board will determine standards of scholarship both for entrance and for graduation and all graduates from all the schools will be graduated from the University. It is believed that this will help to raise the standard of scholarship in all the schools, and that it will give increased standing and significance to all the schools.

It is the purpose of those interested to add, at the proper time, departments of art and of music and, perhaps, still other departments. It is also the dream of the projectors that some time in the future all the departments may be located on one campus and that all will be liberally endowed. A few hundred thousand dollars at this juncture would add interest to the enterprise.

This form of organization is not new in the world. Oxford University, England, is made up of eighteen or twenty colleges, each being independently endowed and managed. The University fixes the standard of scholarship for all and gives diplomas for all.

CODE OF PROFESSIONAL ETHICS.

[At the last meeting of the Michigan State Teachers' Association, the following ethical code was adopted:]

1. No superintendent or teacher should become a candidate for a position until it has been definitely decided that the present incumbent shall not remain longer than the present term of contract. When a board of education has taken such action as precludes the present incumbent from being an applicant, or when he has announced that he is not a candidate for re-election, it is proper for another to enter the field as an applicant.

2. No teacher, while under contract, should make application for another position without first securing permission from the board of education for a release in case of an election.

3. A superintendent should never make a proposition to a teacher under contract with another board of education, to leave his position during the term for which he has contracted without first securing the consent of the superintendent and the board of education to give the teacher release from his contract.

4. Each member of the teaching profession should exercise a spirit of loyalty, by giving to other teachers the benefit of his influence; by being careful not to criticise either his predecessor or associates

harshly, and by speaking a good word for them whenever possible. He should avoid doing whatever might tend to weaken the influence of his fellows with school officers, fellow teachers, parents and pupils, and most emphatically he should never underbid another.

5. In a contest for a position, none but strictly honorable means should be employed by the contestants and their friends. After a board of education has made a choice of teacher it should be considered unprofessional for the defeated candidate to criticise the successful one, or to charge him with incompetency, or of having resorted to unfair means in securing the position.

The JOURNAL heartily endorses the above and commends its spirit to all superintendents and teachers.

"THE WITNESS OF THE TEACHER."

The Atlantic Monthly for March begins a series of articles on the public schools which are likely to prove of much interest. The first article is under the above caption. *The Atlantic* caused to be circulated among teachers and superintendents in every part of the country a series of questions to which it asked answers. The inquiries were (1) as to the average number of pupils per teacher; (2) in what proportion the teachers have changed their professions in the last ten years; (3) in what proportion they are more than thirty-five years of age; (4) as to the freedom of teachers from political or other improper influences on their appointment or removal; (5) as to the salaries of teachers of the several grades; (6) as to the requirements for appointments; (7) as to the chances that teachers have for promotion.

The replies to these inquiries were numerous (1189 in all) and came from every state and territory, except two territories. These answers were referred to G. Stanley Hall, who read them, and the article in the *Atlantic* is the result of his study of the facts presented.

The article is full of interest but some of the conclusions are certainly not reliable. Mr. Hall has taken certain extreme statements and given them *general* application. In a number of cases his conclusions rest on insufficient data. In this way great injustice is done to many states. For example under the head of requirements of teachers the only report referred to from N. H. says: "A large proportion in all district schools are young girls, sixteen to twenty years of age, utterly untrained. The majority fail, and accept the first offer of marriage." Mr. Hall makes no comment and leaves the inference to be drawn that this statement is true of the entire state. This cannot be true of N. H. or any other state.

Under the same heading Mr. Hall sums up his conclusions in regard to Indiana as follows: "In Indiana it seems that while the superintendents are often narrow, ignorant, and corrupt men, even the good ones labor under great difficulties in trying to raise the standard of an uninterested and unenthusiastic body of teachers. The rank and file seem to care little for their professional status. They complain

bitterly of personal injustice, but they hardly breathe the proper spirit. Requirements are not rigid or uniform, and county certificates are enough." This is the whole of what is said of Indiana under this head. The statement, applied to the state as a whole, is a *libel*.

Under the head of "tenure of office" the report has this to say of Ohio "In Ohio the teacher is not recognized as a factor in social or political life. He is deprived of the privilege of free speech on all subjects, but especially on the one that concerns him most, namely, reforms in teaching. The people who should be the leaders in educational thought do not call their souls their own. They catch their breath in quick starts when they see a power over them wielding the club of dismissal." The man who wrote this *slander* from Ohio is without doubt a disappointed, disgruntled crank, and we are surprised that Mr. Hall should use such stuff.

Wisconsin is represented by a *failure* who writes. "Unless the teacher is a flatterer and keeps quiet on all political questions, he loses his position." These quotations are sufficient to show that Mr. Hall has taken extreme and exaggerated statements, without eliminating the personal element from them, and made them *representative*. This fact makes many of the summaries and conclusions unreliable if not worthless, but the topics treated give Mr. Hall a good opportunity to say some excellent things, and make suggestions which are valuable. The article is very interesting and well worth reading. Other articles on the public schools are to follow, all by eminent educators. The next paper will be by Fred. W. Atkinson, principal of high school, Springfield, Mass. Subject, "The Training of the Teacher."

SCHOOL SYSTEMS IN LARGE CITIES.

The Indianapolis Commercial Club recently stepped a little out of its usual course and took up for consideration "the government of schools in large cities."

Judge Draper, president of Illinois University and former superintendent of the Cleveland, O., schools, was invited to address the Club on the subject. He made a most excellent address from which we make the following short extracts:

"There are two great departments of school administration. They rest upon widely differing foundations. One relates to the management of the business affairs of the schools, and the other to the supervision of the instruction. In both of these departments there will be inefficiency unless responsibility can be located and punishment for incapacity or neglect is certain.

"But, of course, the life of the schools is in the instruction. The great question in school administration in a large city is how to get a teaching force of uniformly high capacity and of the right spirit. By this I mean a teaching force in which all the members have a sound, general education going far beyond the routine of their work, and are specially or professionally trained in addition to that, and are also possessed of

the spirit of the teacher. The development of such a teaching force in a large city is entirely practicable, but it cannot be done if political, or church, or neighborhood, or social, or any other outside influences are to interfere. The teaching force is to be wholly on the merit basis, or there is no hope. * * * * *

"There is no government so weak as one in which legislative, judicial and executive functions are all vested in one body. Restrict school boards to legislative power alone, give adequate authority to independent executive officers and charge them with responsibility, and you will largely improve the city school systems of the country.

* * * "Set up a plan of operations. System is stronger than any officer. Set it up by legislative action. Separate the functions of officers, and discriminate between them. Confer adequate authority. Locate responsibility. Promote the deserving. Dismiss the weak. Appoint men and women of standing to administer the whole system. You will tell me that right here is the whole difficulty. I admit it, but the difficulty is not insurmountable. Find the way which will work best in each particular community. The intelligence of the community once aroused will find that way. And the aroused and alert intelligence of the community is the price of a good school system equal to the needs of the rapidly developing life of the city."

Charles Martindale, president of the School Board, indorsed President Draper's ideas. He referred at length to the work done by the school board of this city, and said it had been largely instrumental in developing what was regarded throughout this country as an ideal system in many respects. It has, without any law to compel it, voluntarily put the selection of teachers almost absolutely into the hands of the superintendent.

Frank H. Blackledge, another member of the school board, said:—"I heartily agree that the educational side of the work, so far as its purely professional duties are concerned, should be free from restraint. That the head of that department should have the authority to determine the course of instruction and the selection of a corps of teachers, and should be held responsible for the results. Once frame a law so that a man's ability can work out educational problems, free from the petty embarrassments and tyrannies of school boards and you dignify his labor and guarantee his results. Throughout the whole rank and file of the teaching corps there should be the feeling that permanency of position and certainty of promotion depend alone on merit. It would be the electric touch imparting strength and spirit to the whole system."

City Supt. D. K. Goss, said that from his personal experience he could heartily indorse the ideas advanced by President Draper. He had no cause to complain, as the School Board was not inclined to hamper him in the management of the educational side of his work, but he thought superintendents as a class could accomplish more if they were given more power by law.

J. H. Tomlin, of Shelbyville, made a few remarks. He said: "Give

a man power and let him feel that he will be secure in the exercise of that power and you will increase his courage. But if you direct him to do something without backing him, his courage wanes. He ought to feel free to select teachers without fear or favor."

The Club has appointed a committee whose duty it is to formulate a suitable law for the government of schools in large cities and then if possible secure its passage by the next legislature.

QUESTIONS AND ANSWERS.

STATE BOARD QUESTIONS USED IN FEBRUARY.

GEOGRAPHY.—1. Why should we study political geography after the other two divisions?

2. Does the present scientific method of studying geography agree with the Mosaic Cosmogony? Give reasons for your opinion.

3. What influence upon the commerce of the world do the great ocean currents have?

4. What relation does botany bear to geography?

5. What geographical reasons exist why Cuba should belong to the United States?

6. How does the peculiar shape of the western continent contribute to the temperate climate of Great Britain?

7. (a) "Geography is the description of the earth's surface." (b) "Geography is the knowledge of the earth as the home of man." Which of the above statements is the better definition of geography? Why?

8. Locate Chicago and tell what geographical conditions have led to its great and rapid growth. (Any six, not omitting 7.)

GRAMMAR.—1. Compare and contrast the noun and pronoun with respect to (1) essential ideas, (2) use in sentence, (3) modifiers they may take.

2. Define a relative pronoun. What substantive uses has it in the clause? Illustrate.

3. Grammar deals with the English sentence; therefore, all grammar work consisting of committing to memory portions of a text-book violates good teaching. Explain the significance of the above to the teacher of grammar.

4. What uses has the substantive clause in the sentence? Illustrate.

5. Write two simple, two complex and two compound sentences. From the study of these sentences define the simple sentence; the complex; the compound.

6. State the relations of the objects of thought expressed by the italicized words to the speaker: "*You* are the *gentlemen who* so kindly assisted *me*." "*The book which* the *child* has is not worth *reading*."

ARITHMETIC.—1. Show how you would teach a class the following figures: Triangle, parallelogram and square. To what grade would you apply the instruction?

2. Gloves are sold for 90c. a pair which is $16\frac{2}{3}\%$ less than the price they are marked, but which is $12\frac{1}{2}\%$ more than they cost. What per cent. above cost were they marked?

3. Show how you would lead a class to find the area in a given rectangle. Indicate the questions you would ask the class in developing this figure. How much knowledge of surface would you expect the children to have before attempting to teach them this fact?

4. Write ten questions which you would give to pupils to test their knowledge of the number 6.

5. Give four underlying principles of the G. C. D.

6. "A compound number is a number consisting of two or more denominations." What is the error in the above definition?

7. Divide $\frac{7}{8}$ by $\frac{1}{4}$, effecting the division by constant subtraction.

8. How much linoleum $1\frac{1}{4}$ yds. wide will it take to cover a library floor 84 feet wide and 120 feet long, no allowance for waste? What will it cost at 65c. a linear yard? *(Any six.)*

PHYSIOLOGY.—1. On what principle do you account for the great diversity of structures in the various parts of the body?

2. What are the supporting tissues and in what part of the body is each kind found?

3. What is the structural difference between the voluntary and involuntary muscular tissue and how does cardiac muscular tissue differ from other involuntary muscles?

4. Describe in general terms the circulatory system, stating the function of each part.

5. What are the advantages of the short, wide stomach and long, narrow intestines?

6. Describe the vocal organs.

7. What is reflex action? Give an example.

8. What are the cranial nerves and what is their function?

9. What are some of the advantages and some of the disadvantages of the erect position of man? *(Any five.)*

HISTORY.—1. Generally speaking, what are the immediate effects of the introduction of labor-saving or labor-assisting machinery in a branch of industry?

2. What are the X Y Z papers? Give an account of the circumstances under which they were written.

3. Tell the story of the Mormons in their various homes.

4. Give a description of the Trent affair. Do you think it was finally settled justly?

5. What was the effect of civil war upon Northern industry?

6. Give a brief discussion of the history work in the state course of study. *(Any five.)*

READING.—1. State in brief what a child should gain as a reader during his third year in school.

2. What preparation for the reading lesson would you expect of a third reader pupil? To what extent should the teacher assist in this preparation?

3. Illustrate your plan of teaching the pupils of this grade to pronounce the difficult words.

4. (a) How long would you have third year pupils "stay on the same lesson?" (b) Can the "assignment," "preparation" and "presentation" be made helpful in the third grade? Illustrate.

5. What plan would you adopt to prevent their reading poetry in a "sing-song" manner?

SCIENCE OF EDUCATION.—1. What is the pedagogical meaning of the term *interest*?

2. How does interest differ from the other feelings?

3. In general, how does the state of mind denoted by the term interest stand related to acquisition of knowledge?

4. What is meant by *intrinsic* interest in a subject?

5. If one has a lively intrinsic interest in a subject, will the mastery of the subject be attended by a high degree of mental discipline? Expand this thought somewhat.

6. What is the relation of interest to will exertion?

7. How may the teacher excite the pupil's interest in a subject of study? (Any five.)

HENRY VIII.—1. *King Henry (aside)*—

"I may perceive
These Cardinals trifle with me;
I abhor this dilatory sloth and tricks of Rome."

To what does Henry here refer?

2. What connection had Cranmer with the proceedings at this stage?

3. How came Henry to know that Wolsey sought to delay the granting of the divorce?

4. Why does Wolsey now object to granting the divorce?

5. What was the great aim of Wolsey's ambition?

6. With what offenses is Wolsey charged?

7. Does Wolsey, after his downfall, come to a better realization of the true meaning of life? What evidence does the drama give of this?

8. Give the substance of Wolsey's utterance to Cromwell on the subject of ambition, where he begins,

"Cromwell, I charge thee, fling away ambition;"

9. In your opinion, is Wolsey adequately characterized in this drama?

10. What are Wolsey's predominant characteristics? (Any five.)

"SCIENTIFIC TEMPERANCE."—1. If alcohol is not a heat producer how can you account for the inflammation in the nose and feet following its long use?

2. Are the evils of "treating," so called, more distinctly physical or moral? Give reasons for your opinion.

3. Distillers frequently combine decayed potatoes with the corn. What effects upon the results of distillation has this mixture?

4. If the use of alcoholic drinks tends to lower the temperature, how do you account for the evil effects of immoderate beer drinking in summer?

5. What connection has the constant use of alcohol with Bright's disease?

6. Upon what organs of the system does alcohol first manifest its action? What warning should this give? *(Any five.)*

ANSWERS TO PRECEDING QUESTIONS.

GEOGRAPHY.—1. The phenomena of mathematical geography determine the chief features of physical geography; and these features greatly influence the development of the different phases of political geography. (See answers to geography in March Journal).

2. It agrees with the Mosaic Cosmogony by considering its day as a period occupied by a course of operations causing great changes.

3. They affect the commerce of a country by affecting its productions through the influence they have upon its climate. They also assist in the speed of vessels going their way.

4. Botany bears a close relation to physical geography. On the climate of a country, and on its abundance and fertility of soil, do the growth and life of plants depend. *Botanical* geography discusses the range of the various kinds of plants over the earth's surface.

5. Its nearness to us; its under-water connection with our coast (It is a continental island); and the abundance and importance of its commercial products.

6. By its giving a direction to the Gulf Stream that sends it across the Atlantic, thereby giving Great Britain a temperate climate.

7. Definition (b) because a description of the earth's surface is only a small part of geography. The phenomena of the movements of the earth; the changes that are constantly going on, with their causes; the causes and effects of the different climates, etc., would not be included in the term "descriptive." A knowledge of the earth as the home of man,—whose life must be adapted to these conditions,—would include every phase of environment necessary to existence, and only that definition which embodies this idea, is complete.

8. (a) Its central location; (b) its location at the head of lake navigation; (c) its fertile and prairie like surroundings; its nearness to valuable natural resources.

GRAMMAR.—1. They both express objects of thought; both may be used in all the case relations; both may be modified by a word, a phrase, or a clause. The pronoun is never used as an "adverbial object" nor does it take an article as a modifier. It does not take, as such, a qualifying adjective, unless the attribute is asserted; nor does it take a prepositional phrase as a modifier.

2. It may be used as a *subject*; as, "The bark *that* held the prince went down." It may be used as an object; as, "I am the person *whom* you examined"—"That is the tree to *which* you directed me." It may be used as a predicate nominative; as, "He is the same kind-hearted man *that* he was years ago."

3. It should signify that definitions and principles should be developed inductively.

4. As a substantive, a proposition may be used as (a) a subject (*That he is an honest man is evident.*); (b) a predicate nominative (*The general belief is that he will succeed*); (c) an appositive nominative (*The report that he was killed is untrue.*); (d) an independent nominative (*That he is dishonest being known he will get no work.*); (e) as a direct object (*I believe that he is an honest man.*); (f) as a predicate object (*He wishes the question for discussion to be, "Should we hang traitors?"*); (g) as a prepositional object (*Much will depend on who the commissioners are.*); (h) as an appositive object (*Remember the saying, "Know thyself."*) (i) as a passive object (*I was told that I should go.*)

5. A simple sentence is one which expresses a single proposition. A complex sentence is one which expresses a principal proposition and one or more subordinate propositions. A compound sentence is one which expresses two or more co-ordinate independent propositions, either or both of which may be modified by one or more subordinate propositions.

6. In the first sentence, the words,—*you, gentleman, who*,—represent the object of thought spoken to; the word *me* represents the speaker; the words,—*book, which, child, reading*, represent objects of thought spoken of.

ARITHMETIC.—1. There are certain elemental exercises that should precede the teaching of these figures. When ready for them use models of some kind (pasteboard will do), let them be drawn, and let all resemblances and differences be carefully noted. The relation of this exercise to previous exercises should also be clearly set forth. The elements of such instruction can be given to pupils of the third reader grade, with good results; and the higher the grade, the more difficult may be the features that may be added.

2. 90 cents = $\frac{3}{4}$ of the marked price; hence marked price is 108 cents. Also 90 cents = $\frac{3}{4}$ of the cost; hence the cost is 80 cents. 108 cents is 35% more than 80 cents.

3. Let the length be measured; suppose it is 18 inches. Let the width be measured; suppose it is 12 inches. If previous instruction has been in the right line, the pupil can now readily answer the following questions:—(a) How many square inches can be placed along the side in a row? How many such rows will the width admit of? Twelve rows with eighteen square inches in a row amount to how many square inches?

4. Six marbles are five marbles and—marble.

Six marbles are four marbles and—marbles.

&

&

&

Six marbles are how many threes? twos? ones?

Here are six marbles. If I move one away how many are left? If I move two away, &c.

Bring me six books. Make six marks on your slate.

5. The g. c. d. of two numbers is the product of all their common

prime factors; is a divisor of their sum, of their difference, and of the sum or difference of one number and any number of times the other. The g. c. d. of two numbers is the less number, or the difference between the numbers, or some factor of that difference.

6. It should read that it consists of units of two or more denominations of the same kind of measure, weight, or money value.

7. $\frac{1}{10} = \frac{2}{20}$; $\frac{2}{20} = \frac{3}{30}$; $\frac{3}{30} - \frac{2}{30} = \frac{1}{30}$; $\frac{1}{30} - \frac{2}{30} = \frac{1}{30}$; $\frac{1}{30} - \frac{2}{30} = \frac{1}{30}$, which is less than $\frac{1}{30}$; $\frac{1}{30}$ has been subtracted *three* times; the remainder $\frac{1}{30}$ is $\frac{1}{30}$ of $\frac{1}{30}$; hence, the quotient is $3\frac{1}{30}$.

8. Answer, \$416.

PHYSIOLOGY.—1. On account of the principle that the structure of an organ is adapted to the function that it must perform; and as functions are numerous and varied, so likewise must be the structures.

2. The supporting tissues are the osseous, the cartilaginous, and the connective. The osseous forms the frame work of the body; the connective tissue is found throughout the remainder of the body; and the cartilaginous is found on the ends of bones, and is found constituting the framework of certain parts.

3. The voluntary muscular tissue is striated, the cells being so arranged that they have a striped appearance under the microscope. Involuntary muscular tissue is non-striated—it presents no such appearance, the fibres being smooth. Cardiac muscular tissue is involuntary, yet its fibres are striated.

4. See text-book, chapters 7 and 8.

5. The short wide stomach is adapted to a thorough spreading out of the contents, and a mixing of the contents with the various fluids, so as to bring the whole mass into a uniform semifluid state. A long narrow intestine secures opportunity for the absorptive process to gather from the slow-moving onward mass all the nutritive material that it contains.

6. See text-book, chapter 14.

7. A reflex action is the generation of nerve force occurring as a consequence of an impression received by a nerve center, or ganglion. An example of the effect of a reflex action is the prompt drawing away of the hand when it has touched a hot stove.

8. The cranial nerves, as a unit, do not have a special function. They are considered in groups. (a) The olfactory, optic, auditory, part of the glosso-pharyngeal, and of the lingual branch of the fifth are nerves of *special sense*. (b) The greater portion of the fifth is made up of nerves of *common sensation*. (c) The third, fourth, lesser division of the fifth, the sixth, facial, and hypoglossal are nerves of *motion*. (d) The vagus, spinal accessory, and part of the glosso-pharyngeal are *mixed nerves*.

9. (a) He can look up and around with better results. (b) His hands can be trained to actions more delicate and skillful. (c) By progressing on the feet, his hands are left free for grasping.—(a) He "stubs his toe" oftener than he otherwise would. (b) He cannot go on "all fours" quite as well as the dog or the cat.

HISTORY.—1. Immediate effects are (a) the cheapening of wages and of the article produced; (b) an increased number of idle men; (c) over-production. Later effects are (a) a general use of the article; (b) the employment of a greater number of men; (c) trade-unions; (d) strikes.

2. To France, Jay's treaty was very distasteful. The United States was charged with favoring Great Britain and granting her privileges denied to France; the French minister in America was ordered to return by the French Directory, and almost immediately after the inauguration of Adams, the American minister was refused recognition by the French government. Napoleon's great victories in Italy over the Austrian forces gave the French government confidence, and laws injurious to American commerce were passed. American vessels were seized, and the vessels and cargoes sold. Adams was anxious to avoid war. Following Washington's example, he sent a special mission to France, selecting John Marshall, Elbridge Gerry, and Charles C. Pinckney as envoys, who were, if possible to arrange matters, and negotiate a new treaty which would be satisfactory to both France and the United States. These envoys were treated with great indignity by the French government, and were told that before any negotiations were begun a large sum of money must be paid to the Directory. Such a course was spurned by the envoys, who were soon ordered to leave France. This they did, and the United States government published the remarkable correspondence which had passed between the envoys and the secret agents of the directory. This is known as the "X. Y. Z. correspondence," the agents having used these initials as their signature.

3. The founder was Joseph Smith of western New York. He published in 1830, the Book of Mormon as a supplement to the Bible. He and his followers first moved to Ohio, but were compelled to leave on account of the failure of a bank in which Smith was interested. He then went to Missouri where in the course of time he became obnoxious to the people for various reasons. He crossed the Mississippi into Illinois, obtained a tract of land and a liberal charter from the legislature, and began to build a city, Nauvoo, on the banks of the river. Here his defiance of law ended in a mob shooting him and his brother. Under a new leader, Brigham Young, the whole band emigrated to a place near Great Salt Lake, and named their state Deseret, which means according to their interpretation, "The Land of the Honey Bee." Additions to their numbers were made chiefly from Great Britain, Norway and Sweden, gathered by missionaries frequently sent out. They have been quite troublesome, but legislation backed by troops has about succeeded in breaking up polygamy, the corner-stone of their religion. (See paragraphs, 277, 278, text-book.)

4. (See text-book, paragraph 326). All authorities agree that it was settled justly. (See editorial in Indianapolis Journal, March 14, 1896).

5. Northern industry received new life, and every energy was manifest. The government needed various supplies and paid high prices. (See paragraph 356).

6. (See state course of study).

READING.—1. A mastery of that grade of ideas and their relations, that is usually found in Third Reader selections, accompanied by a power of easy and natural oral expression.

2. The assignment should be some special feature; the assistance should be just enough to give the class a clear idea of what was to be worked out, and an illustration of how it should be done. The pupil should then carefully prepare what had been assigned.

3. Let the more difficult words be copied on the blackboard, and carefully spelled and pronounced by the class. Drill frequently and thoroughly on difficult sounds. Call to mind other words containing similar difficulties. By comparison, contrast, and vocal drill the difficulties will be overcome.

4. (a) It is altogether owing to the nature of the lesson, and the amount of *meal* in it. Some selections may be exhausted in one lesson; others contain food for five or more lessons. (b) See answer to (2). Much depends upon the way the teacher presents the work which he wishes accomplished. It should be tangible, the parts should be related, and there should be a clear and definite way for the pupil to accomplish his work.

5. If the thought is clear to the pupil and he knows what he is about, there will be no sing-song tone. Let the teacher see that these two conditions are present.

SCIENCE OF EDUCATION.—1. "By interest we mean the natural bent or inclination of the mind to find satisfaction in a subject when it is properly presented. It is the natural attractiveness of the subject that draws and holds the attention."

2. "Interest differs from other feelings, such as desire or longing for an object, since it is satisfied with the simple contemplation without asking for possession."

3. Interest is necessary to a proper knowledge of a subject. The mind will not "go after" all the phases of a subject and their relations unless stimulated to do so by an intense interest that keeps the mind alert. Interest is the main spring that keeps the faculties moving.

4. By intrinsic interest is meant that which is native to the subject, and which springs up naturally when the mind is brought face to face with something attractive.

5. It will be attended by a high degree of mental discipline, because the faculties have been to a high degree active, the activity being intensified by the desire to know and by the pleasure of acquisition.

6. "A proper interest aims, finally, at the highest form of quiet, sustained will-exertion. The succession of steps leading up to will-energy, is interest, desire, and will."

7. By leading the pupil to see in it the relations it bears to himself, and by presenting the subject in a proper manner.

[In McMurry's General Method, read pages 61 to 66 inclusive; in Page's Theory and Practice, read chapter VIII.]

SCIENTIFIC TEMPERANCE. -1. The paralysis of the vaso-motor nerves occasioned by the long use of alcohol causes relaxation of the muscular coats of the capillaries, and they become swollen with blood; this excess of blood causes the inflammation which is seen in the nose and feet.

2. The evil of treating is more distinctly moral than physical. A person takes more drink than he would without the "treat," and thereby creates a habit of accepting something that is unearned. This tends toward indolence. The "treater" has a wrong notion of liberality—and this tends toward a very serious misuse of money.

3. Potatoes furnish amyl alcohol in excess of that obtained from corn. The product of a distilled combination of corn and potatoes is a more powerful intoxicant than the product obtained from corn alone.

4. The small per cent. of alcohol in beer has little effect upon the temperature of the body. The evil effects of immoderate beer-drinking are traced to a disturbance of constructive and destructive changes which take place among the tissues. Beer increases the amount of fat by adding a kind that is not pure. It makes the muscle weak and causes "fatty degeneration."

5. The kidneys of the drinker are excited to action to eliminate the alcohol from the system, and the habitual use of the beverage produces deteriorations of structure in the kidneys.

6. It first affects the nerves. This effect is reflected on the vessels of the skin and there is a temporary flushing apparent, and a sensation of warmth. It next affects the circulation and then the brain. We should not put anything into our stomach to steal away our brains.

FOOD FOR THOUGHT.

[Send all communications to W. F. L. Sanders, Connersville, Ind. They should be received by Apr. 18. Be prompt. Write only on one side of your paper.]

SOLUTIONS RECEIVED.

118. Let x = the weight of the deer.

Then, $150 : x :: x : 190$, from which we get $x = 168.8+$, answer.
(J. A. AUBRY, Headice.)

Let x = the weight of the deer, and a and b the arms of the lever, and we have from the first balancing $ax = 150b$; and from the second balancing, $bx = 190a$; and multiplying these, and omitting ab from each member, we have $x^2 = 150 \times 190$, from which we get $x = 168.8194+$, the number of pounds the deer weighed.
(J. C. GREGG.)

120. $760 \div 03 = 25333\frac{1}{3}$; (1st stock); $25333\frac{1}{3} \times .93 \div .95 = 24800$ (2nd stock); $24800 \times .03\frac{1}{2} = 868$, second income; $868 - 760 - 108$, increase in income.
(JOHN MORROW, Charlestown.)

The steps all indicated in order form the following expression:—

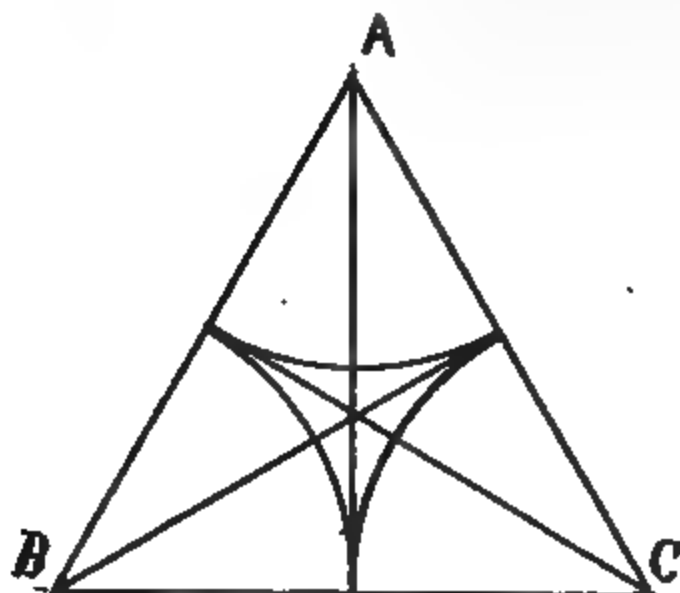
$$\$750 \times \frac{190}{150} \times \frac{93}{95} \times \frac{1}{100} \times 100 = \$868, \text{ new income.}$$

$$\$868 - \$760 = \$108, \text{ increase in income.}$$

(ED.)

PROBLEM 107.

There is a Quaker we understand,
 Who for three sons laid off his land,
 And made three equal circles meet,
 So as to bound an acre neat.
 Just in the centre of that acre
 Is found the dwelling of the Quaker;
 In centres of the circle round,
 A dwelling for each son is found:
 Now can you tell by skill and art,
 How many rods they live apart?



SOLUTION.—Let A, B and C be the centres of the circles. Joining them we have an equilateral triangle.

The sum of the areas of the three sectors is equal to one-half the area of one of the circles.

Let D = the diameter, and R = the radius. Area of the triangle = $R^2 \sqrt{3}$; area of the three sectors = $\frac{1}{2} [3.1416 R^2]$; hence, we have,
 $R^2 \sqrt{3} - \frac{1}{2} [3.1416 R^2] = 160$,
 from which $R = 31.5+$;
 hence $D = 63+$.

(BY ED WADE, Montgomery.)

SOLUTION.—Let x = the diameter; then $.7854x^2$ = area of each circle, and $3927x^2$ = area of the three sectors; hence, $3927x^2 \div 160$ = the area of the triangle; but, $\frac{x^2}{4} \sqrt{3}$ = area of triangle; therefore, we have,

$$\frac{x^2}{4} \sqrt{3} = 3927x^2 \div 160,$$

from which $x = 63+$; hence, radius = 31.5+.

(BY JOHN MORROW, Charlestown, Ind.)

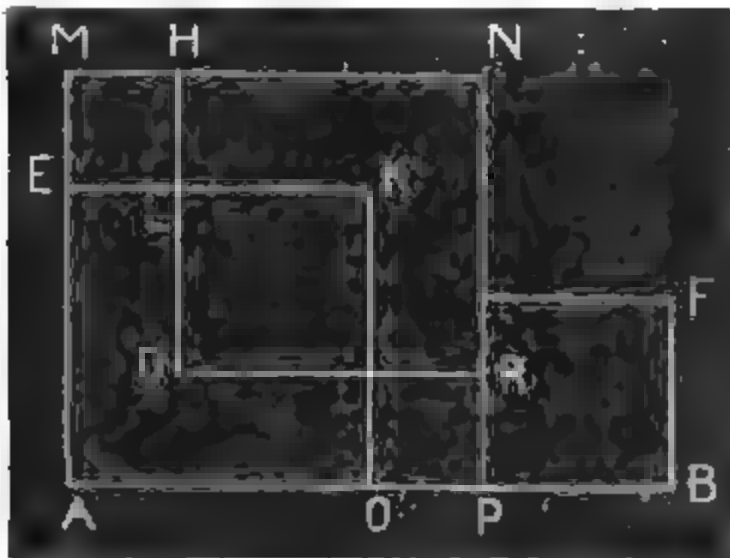
[Draw the altitudes; they intersect in the same point; in *this* triangle they are also the *medians*, and hence divide each other into parts as 1:2. Therefore the father lives $\frac{2}{3}$ of the distance from any vertex to the opposite side. This distance = the altitude = $R \sqrt{3} = 31.5 \times 1.732 = 54.558$; $\frac{2}{3}$ of 54.558 = 36.372+, the number of rods the farmer lives from each son.—EDITOR.]

PROBLEM 108. \$71,400 of stock paying 5%, at 137½ is transferred to stock paying 9½%, at 218¼. Find the change in income. (Brokerage ¼ in each transaction.)

SOLUTION.—
 $71,400 \times (137\frac{1}{2} - \frac{1}{4}) = 97,728.75$;
 $97,728.75 \div (218\frac{1}{4} + \frac{1}{4}) = 44,625$;
 5% of \$71,400 = \$4,194.75;
 9½% of \$44,625 = \$4,080

\$ 114.75. answer.

(BY R. E. DYKINS, Lexington, Ind.)



PROBLEM 106. A line AB is divided equally at O and unequally at P; to prove,

$$AP^2 + PB^2 = 2AO^2 + 2PO^2$$

SOLUTION.—Let AB be any straight line divided into equal parts at O, and into unequal parts at P. To prove

$$AP^2 + PB^2 = 2AO^2 + 2PO^2.$$

Construct squares on AP, PB and AO. Draw square DN = square AK; then square DK = square PF, and square EH = square OR. $AP^2 + PB^2$ = the whole figure.

$AO^2 + HN^2 = LK^2 + MH^2 + OP^2 + PB^2$ = the whole figure; simplifying this expression by putting $AO^2 + HN^2 = 2AO^2$, and $MH^2 + PO^2 = 2PO^2$, and cancelling PB^2 and $-LK^2$, we have $2AO^2 + 2PO^2$ = the whole figure. Therefore $AP^2 + PB^2 = 2AO^2 + 2PO^2$ Q. E. D.

[JOSHUA HAYES.]

SOLUTION.—Let $AB = x$; and $AP = y$; then $PB = x - y$; AO or $BO = \frac{x}{2}$; $PO = y - \frac{x}{2}$. Now, by using these values, we find

$$AP^2 + PB^2 = x^2 - 2xy + 2y^2;$$

$$\text{and } 2AO^2 + 2PO^2 = x^2 - 2xy + 2y^2;$$

Therefore, $AP^2 + PB^2 = 2AO^2 + 2PO^2$ Q. E. D.

[LOREN M. EDWARDS, Liberty.]

CREDITS TO PROBLEMS.—89, Wm. H. Parkinson, Purdue University. . . 95, J. S. Stommel, Hanover Centre . . . 117, Joshua Hayes, Springport. . . 117, 118, Otto Clayton Fowler . . 120, F. A. Kiser, Mishawaka; Hib Bennett, Eureka; N. H. Thompson, Convenience; Everett Beadles, Velpen; D. V. Gay, Orland; Ollie Willoughby, Marble Corner; Philip Abell, Velpen; Maggie Clark, Mansan; J. H. Shock, Danville; J. H. Johnson, Oakville . . 118, 120, J. A. Aubry, Headlee; W. F. Headley, Bloomington; James B. Royce, Terre Haute; Walter N. Vanscoyoc, Crawfordsville . . 98, 120, John Morrow, Charlestown . . 118, 120, Irwin S. Morse, Crumstown . . 117, 118, 120, J. C. Gregg, Brazil . . . 118, 120, Geo. A. Ostheimer.

SOLUTIONS REQUESTED.

(From the *Indiana Complete Arithmetic*.)

PAGE 208, Ex. 10. By the preceding example the rate is $1\frac{1}{3}\%$, and each poll \$1. $1\frac{1}{3}\%$ of \$8500 = \$113.33 $\frac{1}{3}$; \$113.33 $\frac{1}{3}$ + \$3 (three polls) = \$116.33 $\frac{1}{3}$, which in business is considered \$116.34.

PAGE 210, EX. 9 $33\frac{1}{3}\% = \$1200$; $100\% = \$3600$; $\$3600 \div \$1200 = \$4800$, total cost; $16\frac{2}{3}\%$ of $\$4800 = \800 , to be gained; $\$4800 + \$800 = \$5600$, the desired selling price. If 1800 yds. sell for $\$5600$, one yd. would sell for $\$3.11\frac{1}{3}$, which in business is considered $\$3.12$.

PAGE 284, EX. 51. The average price per stove = $\$9$. We must find a group that will preserve this average.

(a) A stove at $\$19$, exceeds the average $\$10$.

(b) A stove at $\$7$, falls below the average $\$2$.

(c) A stove at $\$6$, falls below the average $\$3$.

To preserve the average, we must fall below it as much as we exceed it. It is easily seen that to do this we must sell 2 stoves of the (b) kind and 2 stoves of the (c) kind for every one that we sell of the (a) kind. In this lot of five stoves the average is preserved. Four lots of this kind will make twenty stoves, in which we would have (4×1) stoves at $\$19$; (4×2) stoves at $\$7$; and (4×2) stoves at $\$6$.

QUERIES AND ANSWERS.

36. On page 87, in Montgomery's Leading Facts of American History, in speaking of Elliot's translation of the Bible into the Indian language the author says, "There is probably not more than a single person now living who can read a single chapter of it."

QUERY: Who is that person referred to?

[CHARLES MCCARTHY, Lebanon.]

37. What was the proposed amendment to the U. S. Constitution, sometimes given as the thirteenth amendment, proposed in 1811? [ID.]

38. Who is the author of the following, and where can it be found?

"When the maple leaves turn yellow,
And the sumach dusky red,
When the forest's crimson life blood
Stains the branches overhead,
When the smoky Indian Summer
Spreads its haze upon the hill,
And October's gorgeous raiment
Mirrors glory in the rill,
Think I often of the legend," etc.

[ED.]

39. *Quite* a number of lives were lost, and *so* many buildings *shaken down*, or so badly damaged by repeated shocks, *that* it seemed at the time *as if* the entire city would be reduced *to ruins*.

[WILL H. TATE, Columbia.]

"*Quite*" is an adverb modifying the adjective "*a*"; or else call "*Quite a*" an adjective modifying "*number*."

"*so*" is an adverb of degree, modifying "*many*."

"*shaken*" is a past passive participle, and forms part of the predicate (*were*) *shaken*.

"*down*" is an adverb, modifying "*shaken*."

"*that*" is a conjunctive adverb, joining its clause to the adverb "*so*," and modifying "*seemed*."

"*as if*" is taken as a unit, and is a subordinate conjunction, joining its clause to "*seemed*."

to ruins" is a prepositional adverbial phrase, modifying "*reduced*."

[ED.]

33. ANSWER.—Governor, Claude Matthews, \$5000; Lieut Governor, Mortimer Nye, \$1000; Secretary of State, W. D. Owen, \$6500; Attorney General, W. A. Ketcham, \$2500; Auditor, A. C. Daily, \$7500; Treasurer, F. J. Scholz, \$3000; Adjutant General, Irwin Robbins, \$—; Chief Justice, Leander J. Monks, \$4500; Clerk of Supreme Court, Alexander Hess, \$—; Supt. of Public Instruction, D. M. Geeting, \$2500; State Geologist, W. S. Blatchley, \$2000.—[From the *Tribune Almanac*.]

32. ANSWER.—R. H. Alvey, Judge of Court of Appeals of D. C. David J. Brewer, Associate Judge of U. S. Supreme Court. A. D. White, Ex-Minister to Russia. Frederick Coudert, one of the attorneys in the Behring Sea affair. Daniel C. Gilman, President of Johns Hopkins University. [J. H. SHOCK, Danville.]

34. ANSWER.—The answer to the 27th example, page 257 of the Complete Arithmetic is correct. An agent should always receive commission on the amount of *money* that he spends or receives. \$14500 stock at $96\frac{1}{2} = \$13949$; he received \$139.49 which is 1 per cent. of \$13949. [EVERETT BEADLES, Velpen.]

35. PARTIAL ANSWER.—In March 1803, Congress made a grant of 11520 acres of land to Lafayette. In the year following he was authorized to locate his warrant on any vacant land in the Territory of Orleans; and, on the 7th of April, 1806, his agent in this country located a tract of 1000 acres vacant land adjoining the city of New Orleans. On the 3rd of March, 1807, Congress without adverting to this location in behalf of the General, and indeed wholly unconscious of the fact that it had been made, granted to the corporation of the city of New Orleans a space of six hundred yards around the fortifications of the city, including a valuable portion of the very land that had been entered by the General. Upon being notified of this, La Fayette directed his agent to make a location elsewhere, which he accordingly did, in the near vicinity; but the land thus located was of little value, while that which he relinquished was valued at \$50,000.

In December, 1824, while Lafayette was visiting this country, congress passed an act (approved Dec. 28) authorizing the payment to him of \$200,000, and the granting to him of one *township of land* on any of the unappropriated lands of the United States.

QUERY: Where was this township of land located? [ED.]

The conscious water saw its God and blushed" is a prize essay written by John Milton while attending college. His subject was Christ's turning the water into wine at a marriage in Cana, Galilee.

[GEO. UPLINGER, Coal Creek.]

CREDITS TO QUERIES —31, Geo. Uplinger, Coal Creek... 32, Ollie Willoughby, Marble Corner; J. H. Shock, Danville....34. Everett Beadles, Velpen; Yonnie Moss, Ashboro.

NOTE.—None of the queries of the January number has been answered. We hope that many will refer back to that number and send in answers at once, [ED.]

PROBLEMS.

121. What is the area of a field, whose sides in successive order are 16, 20, 30 and 24 rds., and whose diagonals are equal?

[JOHN MORROW, Charlestown.]

122. AB is a chord of a circle. At B draw a tangent, and at A a radius and a perpendicular to the tangent. Show that AB bisects the angle at A.

[J. C. GREGG, A. M.]

123. A ball which is a perfect sphere is 12 inches in diameter. What is the size of a hole through the centre that will cut away half the contents?

[E. T. VANHOOK, Rushville.]

124. A person has \$5000 stock in the 3 per cents. which he sells and re-invests in the $3\frac{1}{2}$ per cents, at $87\frac{3}{4}$ (brokerage $\frac{1}{8}$ in each case and increases his income by \$5; find the price of the 3 per cents. [Ed.]

[Send in your solutions and answers early.]

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Any one who will send a new subscription to the JOURNAL, or a renewal and \$1.25, will receive as a premium one of the following books:

"THE EVOLUTION OF DODD," the best pedagogical story ever written, one that should be read by every teacher.

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HARVARD UNIVERSITY will open a summer term July 3. See adv.

J. B. LEMASTERS will conduct a normal at Trafalgar this summer.

BEDFORD is to have a new school building. This will delight Supt. Chas. Cunningham.

WASHINGTON will erect a new eight-room school building this year. Supt. Axtell is happy.

EARLHAM COLLEGE begins its spring and review term April 1 and its summer or normal term June 16.

THE Central Normal, at Danville, is next to the largest school in the state and is steadily growing. It courts investigation as to the character of its work.

WHITELAND.—W. D. Trout as principal is doing good work. The high school library is one of the best in the state in a school of that size and it is steadily increasing.

THE Hope Normal school reports good growth and good prospects. G. W. Thompson is principal of the normal department. It has a training school that is of great service to teachers.

THE two beautiful pictures, one of Longfellow and the other of his home, found on another page, are from cuts kindly loaned by Houghton, Mifflin & Co., Boston, publishers of Longfellow's works.

UNION CHRISTIAN COLLEGE, at Merom, opened its spring term March 24. Special provision is made in this term for those who wish to get ready to teach. Send for circular to President L. J. Aldrich.

THE Huntington Normal and Preparatory school is not yet a year old, but has earned a right to live. It does good work. Edwin E. Macy is principal and ex-County Supt. James B. De Armitt is associate principal.

IN June, July and August special questions will be sent out by the State Board for high school teachers. A high school teacher who teaches only one or two studies needs be examined only on what he teaches.

WISCONSIN has already in operation six state normal schools and a seventh one has been provided for. The building is in process of erection at West Superior and the trustees are at present in search of a president.

LOWELL.—The high school of this city will send forth seven graduates in June. A new high school of 8 rooms is being erected, fitted with all modern improvements. Frank J. Heighway, who is serving his third year, is superintendent.

THE Tri-State normal at Angola, L. M. Sniff, president, continues to make flattering reports. It has started four classes in Latin this year and will have to start another May 5. It will for the first time hold a summer term, beginning June 23.

THE Indianapolis Industrial Training School is growing in popularity. It now enrolls over 700 students. The manual training department is especially popular. Nearly all the boys, 300, take that work. C. E. Emmerich is still the efficient principal.

THE fourth term of the Green county normal will open at Worthington, April 20. The best teaching talent in the county will be engaged in it and a large attendance is expected. W. D. Kerlin, superintendent of the Worthington schools, will be at the head.

OHIO Valley Normal College is the name of the new normal at Corydon. The new brick building was built for the school and is especially adapted to its uses. The spring term will open April 7th. R. A. Brown is principal and will be glad to answer questions.

WABASH.—The Wabash high school building which was one of the finest in the state, was recently destroyed by fire. This is a loss greatly to be regretted for many reasons. Supt. M. W. Harrison and principal Miss Adelaide Baylor, will be heart-broken over the loss.

THE State Normal school, beginning with the spring term, will require a strict examination from all except graduates from colleges, commissioned high schools and persons holding teachers' licenses for one, two or three years. It is the purpose to raise the standard for entrance.

NEW ALBANY.—The schools gave a Washington Entertainment, Feb. 22, for the benefit of the school library and made about \$435. The Declaration of Independence was dramatized. Songs, tableaux, declamations and essays were judiciously mingled and the program was a delightful one.

IOWA.—The State Supt., Henry Sabin, has arranged for six meetings in different localities and insists that every superintendent shall attend at least one of these meetings. He will be present and discuss with the superintendents in an informal manner some of the vital school problems. A good movement.

THE Western Drawing Teachers' Association will hold its annual meeting in Indianapolis April 30 and May 1-2. This is an important meeting and will be largely attended. Some of the best talent in the country will be present. For full program and particulars address the secretary, E. Newton Reser, La Fayette.

THE HOPE REPUBLICAN has an article in a recent issue urging the necessity of more state normal schools. It states that 50 per cent. of the students that attend the State Normal come from the twenty counties in the neighborhood of Terre Haute and insists that at least four other such schools are necessary to supply the needs of the state.

THE Y. P. R. C. in this state is making a greater success than ever this year. The state manager, Geo. F. Bass, has already sold over 40,000 books this year and still more will be sold before the end of the school year. The sale already made exceeds any previous yearly sale. The number of readers of course greatly exceeds the number of books sold.

FAIRMOUNT ACADEMY was not entirely destroyed by fire as published in the papers. Only five rooms were burned and the other eight and the roof were saved. The loss is only \$1500 instead of \$10,000. The school lost only one day and is going right on. E. O. Ellis is in charge of the academy and says that the building will soon be made as good as new.

THE Southern Indiana Teachers' Association will meet in Washington, Apr. 9. The program is an excellent one and some of the ablest educational men in the state will read papers. The attendance should be large. Write to W. F. Axtell at Washington for all desired information. A. E. Humke, superintendent of the Vincennes schools, is president.

WESTERN RESERVE UNIVERSITY at Cleveland, O., is growing rapidly. Mrs. S. N. Harkness of New York, has recently given \$50,000 to the college for women, which is a part of the university. The catalogues show that in the past five years the number of students has been doubled and that the value of the property has increased at the rate of \$100,000 a year.

DUNKIRK is making a good showing in school matters. The yearly enrollment has reached 740 and the monthly enrollment is 641 with only 40 tardies. Twelve teachers are employed besides the superintendent. A year ago a public school library was started and now contains 350 volumes. Everything is moving smoothly under the guiding hand of Supt. Elias Boltz.

THE State Board of Education will open bids for two new grammars, elementary and complete, May 13. The books now in use are not satisfactory. It is understood that the histories and physiologies now in use will be revised. Up to date there have been as many changes in text-books since the present school book law was enacted as under the old regime and with this difference—under the present law the people do not get the benefit of introductory or exchange prices.

KOSCIUSKO CO.—At the Teachers' Association which met at Warsaw, March 6 and 7, the following resolution was passed, viz:

WHEREAS, Our sister states are making rapid strides in the science of teaching and supporting normal schools, and

WHEREAS, Our higher educational institutions are in the center and southern part of the state, therefore

Resolved, That we, as teachers, will do all in our power to induce our legislators to establish a normal school in the northern part of the state.

A. A. RASOR, Pres.

H. F. ADUDELL, Sec'y.

CLAY COUNTY.—Supt. Chilson has sent a circular letter to teachers in which he informs them that if they continue to teach they must show growth and manifest professional spirit. He says that that part of the law which says that a teacher before being licensed again must show evidence of progress, will be enforced. He also criticises severely those teachers who having secured exemption licenses, cease to take further interest in institutes and associations and other means of growth. He says of them: "Such teachers have outlived their usefulness in the school room and should not be employed."

INDIANA UNIVERSITY.—At the recent meeting of the Board of Trustees, Prof. Masters, of geology and Prof. Alely, of mathematics, were granted leave of absence for next year. Both will spend the year in the east in advanced study. For next year Assistant Professor Newson will have charge of the geology, and Associate Professor Davisson of the mathematics. * * * Prof. Waldo, of Purdue, gave a most interesting lecture before the mathematical students March 7, on "Calculus and Civilization." On March 6 he gave his popular lecture on the "Passion Play." Both lectures were greatly appreciated by the students and faculty.

FAYETTE COUNTY held a joint township institute March 7, which was attended by nearly every teacher in the county. The principal instructors were F. A. Cotton, deputy state superintendent; Robert M. King, of the Indianapolis high school; Jesse H. Brown, former superintendent of drawing in the Indianapolis schools and C. W. McClure, of Oxford, Ohio. In addition to these and some good local workers, Geo. F. Bass and W. A. Bell were present and made short talks. The meeting was full of interest and the teachers of this county are determined to know the best and do the best that is attainable. County superintendent Glidewell, has during the year conducted an educational column in each of the papers in the county, and in this way has accomplished much good. His reports to the trustees other than those required by law have also aroused educational interest.

THE Jacksonville meeting was an excellent one—all reports agree in this. The attendance was not as large as it has been sometimes, but large considering the location, and it was representative. The papers were of a high order and the discussions spirited. Pres. L. H. Jones was complimented in every quarter for the courtesy and dispatch with which he managed the convention. The Jacksonville people lacked a great deal of fulfilling the promises made at Cleveland in order to get the meeting. The railroads did not make special rates; neither did the hotels. There were no free excursions as promised and almost no preparation for the meeting. When members arrived on Monday not even a hall had been secured in which to meet, and the one finally provided was unfinished and noisy. C. B. Gilbert, superintendent of the St. Paul, Minn., schools, was elected president. The next meeting will be held in Indianapolis.

PERSONAL.

J. F. Knight, superintendent of the Laporte schools has tendered his resignation.

MISS L. A. MOORE, supervisor of primary instruction at Laporte, has accepted a supervisorship at West Superior, Wis.

W. F. GILCHRIST has been re elected superintendent at Jonesboro for next year. Mrs. Gilchrist will be principal of the high school.

R. B. HARRIS, a leading teacher of Allen county, has been seriously sick for some time but is now recovering. His many friends will congratulate him.

W. H. ELSON, superintendent of West Superior, Wis., reports that in that city they have the free text-book system and that it has many advantages over the ordinary plan.

ARNOLD TOMPKINS, so well and so favorably known in this state, gave the evening address at the Central Illinois Teachers' Association which was held at Danville, March 27-28.

JOSEPH THORNTON, of Anderson, has been elected superintendent of the Rockville schools for next year. He is an I. U. '88 man and stands high as a scholar and as an instructor.

C. W. MCCLURE, formerly of this state, now superintendent of Oxford, O., read a paper at the Fayette county association on "The New Education" that was highly appreciated.

CLARENCE E. MELENEY, of the Teachers' College, N. Y. City, is almost certain to be elected assistant superintendent of N. Y. City schools to take the place of Mr. Bagen, deceased.

DR. A. B. POLAND, state superintendent of New Jersey, has been chosen superintendent of primary instruction of New York City to take the place of N. A. Calkins, deceased. Salary, \$3,750.

JESSE H. BROWN, for many years supervisor of drawing in the Indianapolis schools, recently gave his new entertainment, "Picture Drawing," at the Fayette county association. It was well received.

ROBERT M. KING, of the Indianapolis high school, recently read before the teachers of Fayette county two papers, one on "Henry VIII," and the other on "The Tempest" for which he was much praised. The papers were excellent.

HOWARD SANDISON, whom the JOURNAL reported last month as seriously sick is now far on the way to complete recovery, and hopes soon to be able to resume his school duties. His many friends will be glad to learn this good news.

FRANK A. VIRTUE, a teacher in the schools of Hamilton county has resigned and accepted a government position to teach the Indians of the Pine Ridge Agency reservation at Porcupine, South Dakota. He has a good record for thorough work.

PROF. CYRUS W. HODGIN, of Earlham College, has been nominated on the prohibition ticket for superintendent of public instruction. Prof. Hodgin is one of the best men in the state, but as people vote by parties, he is not likely to be elected.

PRESIDENT DRAPER, of Illinois University, recently addressed the Indianapolis teachers on "The Spirit of the Teacher." The address was a capital one, and the teachers were delighted from start to finish. Judge Draper is one of the strongest educational men in this country.

LEWIS H. JONES, who was president of the late National Superintendents' Convention. at Jacksonville, made an excellent presiding officer. A good judge, speaking of the matter, says that he presided with dignity, was courteous to all and yet was firm and dispatched business promptly and rapidly.

F. A. Cotton, deputy state superintendent, is doing more than any other deputy has ever done in the way of visiting schools and attending teachers' meetings. Having been one of the best county superintendents in the state these visits are always helpful to the teachers. He always has words of suggestion or advice that are heard gladly.

D. M. GEETING, superintendent of public instruction, will, without question, be the nominee on the republican ticket for that office. No other person is even mentioned for the place. Mr. Geeting is an indefatigable worker and is making an excellent officer. The JOURNAL predicts that his renomination may and will be a mere matter of form.

W. H. MACE, professor of history in the University of Syracuse, N. Y., has been granted leave of absence for one year which he proposes to spend in Jena studying. Prof. Mace already ranks among the best historians and history teachers of this country, but he is ambitious to stand at the head. He is an Indiana man, and one that the state may well feel proud of.

MISS GERTRUDE SIMMONS, the Indian that represented Earlham College in the state oratorical contest, won second place, and was very close to the first. All conceded her first place in oratory but the representative from DePauw stood ahead in thought. Considering that Miss Simmons is only a freshman and that she was the youngest one in the contest, she certainly deserves much credit.

PROF. L. WM. BRYAN, of Indiana University, recently made an address in Indianapolis before the Congregational Club. His subject was "The Course of Study in the Public Schools." He treated this in a large, comprehensive way and put it in popular form. He discussed the necessities of a course of study and its *purpose*, and stated the different views held by Dr. Harris and the followers of Herbart. The address was listened to with marked interest and the discussion that followed was appreciative.

LEWIS H. JONES, former superintendent of the Indianapolis schools, recently made the JOURNAL office a pleasant call. He is looking well and reports his work in Cleveland as pleasant. The law there makes his duties as superintendent entirely professional. He is entirely relieved from the business side of school management, and he is also relieved from spending time with members of his board in order to gain permission to do his professional work in his own way. While Mr. Jones likes his work in Cleveland, he would prefer to live in Indianapolis.

A. D. MOFFETT, superintendent of Decatur schools for the past four years, has just been re-elected for the coming year. The schools, under Mr. Moffett's supervision, have made a great stride forward. One ward building has been added during his administration and another will be erected and ready for use in September. One thousand volumes have been added to the school library and a chemical and physical laboratory have been supplied with apparatus. The teaching force has been doubled in number and efficiency and the schools now rank among the best in the state.

PROF. JOSEPH MOORE of Earlham College, graduated from the institution in 1857 and has been connected with its faculty almost continuously since. For a time he was president, but resigned the place because he preferred to devote his entire time to his speciality, natural science. Earlham has one of the best museums in the state, almost exclusively the result of Prof. Moore's labors. Having been born Feb. 29, 1832, he has had the pleasure of celebrating only *sixteen* birthday anniversaries. February 29, 1896, was made the occasion of a great celebration by the entire college. Faculty and students vied in doing honor to one of the best teachers and best men this state has ever known.

BOOK TABLE.

SCOTT'S "LADY OF THE LAKE" by Homer B. Sprague, A. M., Ph. D. is one of the "Studies in English Classics" published by Silver, Burdett, and Company. In addition to the clear, copious, and scholarly notes, there are special features, as follows: An admirable portrait of the author, chronology of his life and works, outline biography and character of James V., how to study English literature, etc. SELECT MINOR POEMS OF JOHN MILTON, by James E. Thomas, B. A., [Harvard], is another volume of the same series, and possessed of the same good qualities. Introductory price of each, 48 cents; mailing price, 55 cents.

METHODS ON MIND-TRAINING—By Catherine Aiken. New York, Harper & Bros., Publishers. This is not a work on psychology as the reader might conclude from the title. It seems to the writer rather a book for memory-training. Miss Aiken has a school at Stanford, Connecticut, and the manner of training outlined in the pages of this book is that practised in her school, and is essentially a system of her own development. A study of the book would be necessary for a full understanding of the system, but perhaps a slight idea may be gained by the following quoted from Charles Dudley Warner in the March 1895 issue of *Harper's Magazine*. He says: "There is used a variety of exercises with the sole object of concentrating the attention. In all cases, the inspiration of the moment urges the pupil to concentrated attention. Cognate to this is the cultivation of the art of listening. As the power of continuous attention increases with practice, pupils will be able to repeat long passages, that is their memories will be strengthened." Mr Warner concludes his article by saying two of the most important contributions to the science of education of the present day have been made by women; Miss Mary Burt's method of beginning literature in the education of the very young, and Miss Catherine Alken's method of mind-training or concentrated attention.

ON SHIFTING SANDS.—By Mrs. B. A. Bullock, Indianapolis. Published by Donohue and Henneberry, Chicago. Indiana people will, of course, be interested in the advent of a new Indiana writer. Mrs. Bullock, the author of the book under consideration was for several years a teacher in the Indianapolis schools and has many friends among the teachers of the state. The story treads on doubtful ground. The heroine, a woman with aspirations finds herself married to an uncongenial husband. He believes that a woman's sphere is to stay at home, cook, and sew on buttons, while she feels that she is made for better things. She secures her husband's reluctant consent to engage in literary work, after she proves to him she can earn enough to pay for a substitute at home. In her new field of labor she meets a man more congenial than her husband, and allows herself to wander in thought and sentiment. The most forceful feature of the book is her struggle with her better self in this trying time,

When she later discovers that this *new* friend is human and falls far short of her ideal, all her better nature comes to her rescue. She shakes off the spell and in the light of the new knowledge that has come to her finds that while her husband's outlook is more limited than hers, he is generous, and one upon whom she can rely at all times. The heroine has a friend, whose married experience is parallel to her own. In the friend's case the result is less satisfactory to the honest reader. Mrs. Bullock deals with a delicate question in a very skillful and dignified manner.

CORNELIUS NEPOS.—Edited by Thomas B. Lindsay, Ph. D., Prof. of Latin and Sanskrit, Boston University. This edition of the *Lives of Cornelius Nepos* is virtually a new work rather than a revision. The material of former editions has been recast and enlarged. The text has been thoroughly revised, and the notes and vocabulary entirely rewritten. The grammatical references have been placed at the foot of the text page. In the marking of long quantities the authority of Marx is followed throughout. The text has over fifty illustrations and a fine double page map of the Roman Empire, Greece and the Chersonesus. The dates of all important events are given in the text. The notes are accurate and explain all difficulties, not giving mere translations without hinting at their sources. The English-Latin exercises have been rewritten and cover the full text of the twenty-five *Lives*. These exercises, while easy and forming connected sense, give thorough drill on special or difficult constructions. Price \$1.10.

TEXT EDITION.—For use in recitations and examinations a separate volume is provided, containing the text alone. Teachers whose classes use the annotated edition will be supplied at introduction with an equal number of copies of the corresponding text edition without charge. To others the text edition will be supplied at 40 cents per copy. American Book Co., Cincinnati, O.

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UNIFORM COURSE OF STUDY.—FIFTH YEAR.

R. A. OGG, GREENCASTLE.

The inter-relation of three lines of study proposed in the Course of Study is not so clearly marked in these grades as in the preceding, partly because the relation should be less intimate and partly because the culture and formal lines are less fully elaborated.

The nature work outside of geography bears little special relation to the culture work, but the form studies in drawing and language should utilize persistently the thought material in store from the other lines. All the ideas gained in the study of plant and animal life will bear upon the work in history through the geography. As the science work is so fully outlined in the course as printed and the form work is so familiar, it has seemed to me desirable to devote the space of this paper largely to the correlation of history and geography. Both concern themselves with the continent of North America. The history work is to be largely biographical and the geography is to get its life from this source. The test made of this method during this year in the study of the Mississippi valley, brings from teachers the declaration that the children's interest is wonderfully quickened by making historic characters the unifying element.

The general physical features of North America have been seen in the fourth year as a preparation for the study of the Mississippi valley. The continent should now be looked at

with reference to its relation to Europe and Asia as to direction and distance (latitude and longitude), shape, size, position of the Gulf of Mexico and West Indies. This will have its complement in the story of Columbus, the direction he sailed, his mistake about its being Asia, the islands he first discovered. The children are already pretty familiar with the main facts about Columbus. The heroic elements in his character should have special prominence. Pupils may write the story of his life from the standpoint of various elements of his character, one viewing his patience and resolution, another his religious spirit, another his manner toward those in authority and to those under his command, another the unjust and ungenerous treatment he received, that indignation against such a course may be aroused. The study of the Cabots will be the occasion for a more particular study of the eastern coast line of North America as pupils in imagination follow them, passing by capes, exploring bays, observing river mouths, questioning in their ignorance what part of Asia they had reached, and viewing all things with peculiar interest. The entire coast line will thus be brought into unity.

The importance of their voyage as the basis of England's claim to North America and the idea that a claim to the coast included all the lands drained into the waters of that coast, should be clearly developed.

This general survey having been completed with the Cabots, Henry Hudson's exploits should afford opportunity for a study of the country farther inland and teach that the discovery or exploration of a river gave a claim to all the country drained by it. Do I seem to emphasize this question of extent of claim? Test those who have completed history and geography and see whether they have any special idea of water-partings as natural boundaries and could apply it to the land we secured in the Louisiana purchase or to our dispute with England over the Oregon boundary. The Hudson should be studied as a type of all the rivers of that region. The slope, the direction of rivers, the fine scenery, the location of cities, all will, if properly presented, make it easier in turn to form a true picture of each river of the coast. A guide book to the Hudson with other aids should be at hand. Peter Stuyvesant should have some attention here, both because of the

sturdy virtues of the man and to show how England came to secure the Dutch claim. William Penn deserves notice as representative of the proprietary form of government instituted in several of the colonies, the religious character of the Quakers and his just dealings with the Indians. The wisdom he displayed in selecting the site for Philadelphia will introduce a brief study of the Delaware river. Other names will incidentally be referred to, but these will give the historic setting for the study of the middle Atlantic states.

Miles Standish may well be the central character in the study of New England as he was not only one of the Pilgrims but embodies the heroic spirit so marked as a Puritan characteristic. Longfellow's Miles Standish will provide the suitable literature. Literary and other prominent characters will have reference, but not be especially studied, as a few dominant figures studied in detail are needed to give vividness of impression and a sense of unity. In Miles Standish all the sufferings and privations of the early settlers will find suggestion, and lines will run out which may be pursued as the teacher deems wise. The climate, soil, productions will be studied with the thought of these pioneers in mind.

The rapid streams, due to the nearness of the mountains to the coast, will bring out the physical features, and the energy and enterprise of the early settlers will suggest why their descendants utilized this water-power by building factories, and this leads to the study of industries, the location of cities, the character of the people at present. Roger Williams is a favorite with the children and will give occasion for instruction in regard to the religious life of the people and has a strong ethical value, as seen in his generous conduct toward those who had banished him in that he prepared them for an Indian attack at great risk to himself. His relation to the Indians, like that of Penn, can be utilized to teach great moral truths. The Merrimac should be studied as the typical New England stream with its many factories and diversified industries. Cartier will be the central figure and the St. Lawrence the physical feature about which will gather the study of the eastern coast of Canada, and the story of Wolfe and Montcalm will bring out the change of ownership.

Farther south Raleigh may well be the center of individual

interest. His romantic career, his courtly manners and relation to Queen Elizabeth, his perception of colonization as the true policy in the new world, rather than the search for gold, and his efforts and sacrifices to establish colonies, will closely relate him to the country and add zest to the study of physical features. John Smith will represent colonization in a different light. A comparison of Smith and Standish will give occasion for noting the difference in character, religion, life and industries of the early settlers of the south and of the north. The difference is fundamental and helps shape the history of the two sections and becomes a cause of the Civil War. The story of Smith will also gratify the desire for Indian stories and lead to a discussion of the Indians as to life, customs and relation to the whites. Oglethorpe deserves a place among these worthies, showing the philanthropic spirit that sometimes marked colonization in contrast with the commercial motive. At this time there should be a generalization of ideas gained of the eastern coast to compare and contrast the sections, noting the commercial advantages, diversity of climate, industries, etc.

The great central region having been carefully studied in the preceding year, will not demand the same treatment as the coast regions. The purpose should be more especially to find its relation to the country as a whole. Its products, industries, railroad and river communication, what it gives and receives, the character of its people, will have most attention. The story of LaSalle, De Soto, Marquette, Boone, Lincoln will come in for review.

The study of the western section should begin with California. Sir Frances Drake's voyage will be the historic connection. The story of the discovery of gold should be fully and clearly told, for this is the key to the life of the whole western region and had much to do in hastening the inevitable conflict over slavery. As mining will occupy much thought, a gold mine or a silver mine, with its attendant camp and life, should be carefully studied. The whole process from ore in the ground to bullion should be studied. Bret Harte, Joaquin Miller, and others will furnish literature which will aid in picturing the life. Later, it was found that California's true wealth was not mineral, but vegetable and climatic, and

a study of these will follow that of natural features and mining life. Oregon, Washington and all the coast, including Alaska, should next be studied because of likeness to California. Lewis and Clark's expedition, as the basis of a claim by the United States, should be noted. Follow southward the second tier of states, including the great basin with common features, industries, etc., and then follow with the study of the remaining states, with the pasturage features of life prominent. This may be continued northward, giving attention to the lake region of Canada, the slopes, the Arctic region with modes of life, efforts to reach the north pole, etc.

Mexico and Central America will constitute the closing part of the year's work. Their physical features are not so distinct as to need great attention, and their civilization does not call for extended study. The distinctive things will be the climate (as we now have tropical conditions) and the people who differ so much from the United States. The difference in vegetation in ascending the mountains should be observed and explained, noting the likeness to different latitudes of North America. The story of Cortez and a picture of the civilization of the early Indians as shown in the accounts of the Montezumas will give historic interest.

The taking up of the Complete Arithmetic will seem heavy work, but it will not differ materially from the work now done. It will require discrimination on the part of the teacher to select what matter in the text should be omitted. The work in the preceding grade should have made pupils ready in the fundamental principles and the work now should cover factoring, common and decimal fractions. Greatest common divisor and least common multiple are practically eliminated. Difficult problems requiring complex reasoning are out of place here and simpler problems, testing understanding of principles and processes should be given in great abundance.

During the consideration of the Indian bill, in congress the question of appropriation of money for the education of Indian children at contract sectarian schools came up and was stricken out by a vote of 93 to 64.

THE PEDAGOGY OF X.*

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This is a pedagogical problem. The conditions are:

1. The members of the normal faculty to be taught.
2. The pedagogy of x the topic.
3. Further mastery of the principles of teaching the general purpose.
4. A teacher ready for trial and great tribulation.
5. How shall this topic be taught to such a class? the question.

The answer involves the entire pedagogy of x , the energy of the teacher and the patience of the class.

Rhetorics give numerous suggestions to beginners in composition. One of these, extremely pertinent at this juncture, is, "Surround your subject with questions." In obedience to this suggestion "the teacher ready for trial" presents his questions.

1. What does the topic mean? Pedagogy must mean the science of the process by which the subject is to be made a possession of the learner, the principles upon which the process depends.

1. X may mean several things. It may here mean simply a *form*, as in a writing lesson.

2. It may be considered as a symbol for a sound, as in phonics.

3. It may represent the unknown quantity, as in mathematics.

4. It may also express the thing desired in any search for truth—the unknown something which must become known if the conditions are sufficient in number and are rightly used.

Where so many meanings are possible, how shall the teacher choose? What shall be his guide? Either meaning is legitimate in itself. Then the teacher must look outside the meaning for the help he needs. The first condition may furnish it. The class to be taught will certainly aid to some extent in fixing the line of movement. But primary and advanced classes may study x as a form, or x as a symbol of power in

*Read before the Faculty Club of the Southern Illinois Normal School.

words, or x as a sign of an unknown thing. Of course this new class may view either of these phases of the subject in a broader light than is possible to primary or intermediate grades. But the class alone will not, can not, fix the limit to the content here presented. The teacher must bring his class and his topic together in the light of his purpose.

This lesson was assigned to show a class of teachers how to work out the process and apply the principles of teaching—teaching any particular lesson, the unknown thing for which x may stand. The teacher is no longer at a loss for authority to proceed. He has his subject matter and has also his general purpose, to produce certain specific effects upon his class.

II. But what are these specific effects? Should he have these clearly in mind ere he goes on? Whatever the conditions of his pupils, he wishes this lesson to leave them in a new state—a state in which they know more, feel more acutely and can choose more easily and more wisely. His pupils demand a triple effect because of their triple nature. The teacher must have a triple purpose because of his desire to produce this triple effect. The teacher is now quite sure that this lesson should give his scholars an advance in knowledge—knowledge of the pedagogy of x . In idea he sees them in that possession and is urged on by his ideal pupils; for he knows that the activity required to possess this knowledge will give an increased power to know. Like a wise man he prudently provides for the future. This lesson shall be an instrument in the hands of his pupils to accomplish related and frequently more difficult tasks. Again, the teacher is assured that as a means to this knowing he must stimulate the sensibilities; he must arouse interest—interest in anticipation, interest in the unfolding process, and interest in the finished product. These bring with them an increased power to feel. That lesson which fails to multiply the pupil's power to feel more acutely and correctly, fails of one-third the full legitimate result. Yet again, the teacher knows that his pupils may know and may feel without making a righteous choice. He has read that man is three-fourths *will*. He has learned from experience that *will* is strengthened by choosing its own peculiar activity. He concludes that his third specific

purpose lies here. He must make this lesson contribute to the activity of the will in this learning process and in all after processes in life. No study, he thinks, is rightly taught if it fails to affect for all time the will of the child. Knowledge and feeling, in a large measure, are means to this end. The teacher's second query is answered. He teaches the pedagogy of x to affect the pupil's intellect, sensibilities and will—to push them further into the realms of the true, the beautiful, and the good. These three effects are essentially inseparable in ideal teaching.

III. What are the mind movements in learning the pedagogy of x . In general, the pupil must think it as he thinks it.

1. He finds that he and they must have some nearly related known matter with which to begin.

2. He and they must think the *form* of the unknown as far as possible and hold it against his and their experiences until a unity is established.

3. This unity is the association of known and unknown. Nothing is absolutely unknown to the learner. There must be some element common to it and some possession of the learner. Otherwise knowing is impossible. Knowledge is a process of finding these common elements and basing new unities upon them. Three steps then to pass into the possession of the pedagogy of x . These his own mind takes and he seeks to stimulate the minds of his pupils to similar activities.

IV. What is his starting point? What, in their possession is the nearest related known thing to this subject matter?

1. They have some experience, five, ten, twenty and forty years in this teaching business.

2. They have learned the form of x in penmanship, its meaning in language and its function in algebra. They have generalized in all these phases of x . They have unified the attributes of x . They are now ready to make a broader generalization and see in x a symbol for all unknown matter in any subject or minor topic in that subject. They are ready to learn that the pedagogy of x is a universal, the pedagogy of every unknown fact required by the school or by the activities of life.

V. What are the means for teaching this content? What will best stimulate the learning process?

This paper is one. This gathering is another. These conveniences are others. All forms of expression, already used or to be used in this discussion and all materials connected therewith have conspired to objectify the content of the lesson. The hope is that these devices have not been unwisely chosen.

VI. Principles and conclusions.

1. The teacher must know his subject-matter and must limit it as his purpose and the needs of the class determine.

2. The teacher must know his class thoroughly. He cannot know his pupils too completely. Every element of their nature, environment, and culture will help or hinder the teaching process.

3. The teacher must have clearly defined aims and these should look toward the unfolding of the highest good in the souls taught.

4. The teacher must lead or stimulate the child to pass from his real to the ideal condition by means of carefully related mental movements, because all such passage is by a series of logically connected steps.

5. The teacher must know the relation of his lesson to the life of the child, the life that now is, and that which is to come. He must strive to have the child see in some degree the relation of this lesson to his own life.

6. The teacher must know where the child is. He cannot know where to begin unless he has this knowledge of his pupil.

7. The teacher must choose such means as clearly embody the thing he wishes to teach, and he must be able to organize these for the end he wishes to reach.

8. That which is true for one lesson is essentially true for all. The mind approaches all topics in fundamentally the same way. The details vary with the nature of the subject-matter taught.

Oh, speak no ill, but lenient be	For life is but a passing day,
To other's failings as your own;	No lip can tell how brief its span;
If you're the first a fault to see,	Then, oh the little time we stay
Be not the first to make it known:	Let's speak of all the best we can.

HERBARTIANISM APPLIED.—PRACTICAL RESULTS.

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It is the fashion to laud the practical. People who have a talent for working a tread-mill are tickled by being told they are "practical". They congratulate themselves that they are attempting no impracticable scheme. They are struggling up no heights of fancy; not they. They think the silliest youth of whom they have ever heard is that young person in Longfellow's poem who bore a flag with the strange device of "Excelsior," and went climbing up the snow and ice therewith, very foolishly beginning his journey in the afternoon. If that young visionary had been a "practical" person, he would have heeded the warning of that old man and of that peasant; and, instead of going on with a tear standing in his bright blue eye, he would have turned in at the voice of the maiden, especially if the maiden's father had a store of bread and cheese at hand.

But the Alpine youth was *not* practical. The pious monks of St. Bernard *were*, and none of them ever perished in the snow. But they did find this unpractical youth half buried in the drift of the avalanche, "lifeless but beautiful."

"There," says our practical friend, "what's the use of being beautiful if you are lifeless." And, as to the meaning of the last three lines of the poem, about a voice falling from the sky "serene and far", our practical friend gives it all up; he does not even ask the solution of the conundrum which it involves.

Now, the real fact is that one "visionary", in the highest sense of the term, is worth many practical men, and for the reason that there would be no practical men if there were no visionaries, as there would be no profitable activity without high thought. The whole use of practical men—and they are never to be disparaged—is to make real in every-day life what the visionary men have seen with their spiritual eyes. We owe incalculable debts to them, but the visionary is cut off from the sympathy of the mass of mankind, who cannot appreciate his ideals. His only solace, like that of the Alpine youth must be the voice "from the sky."

In the matter of educational ideals, however, the time is

fast passing when it is even expected that one must apologize for confessing that he has been inspired by the vision of Herbart, and more especially the enlarged view furnished us by those who are commonly known as Herbartians. We no longer hear it said that it is "impossible." Rarely we hear it said that it is "nothing new." Commonly we are told by one who does not wish to be considered a "back-number" that "he always knew it."

The truth is, that Herbartianism is able to stand the most crucial test in the appeal to experience. Considered solely in relation to what is commonly understood by the *practical* aims of popular education it stands the test. This is true even in spite of certain difficulties, previously pointed out, which time alone can remove. The following test questions were submitted to several competent teachers who had made a two-years' test—long enough to observe the tendencies, to say the least:

Question.—Have any of the so-called "essentials" suffered?

Answer.—The reverse is true.

Such a result is to be expected, yet it is the one about which there have been the gravest doubts and fears. No matter how much one may "learn at school," the ability to use the information thus acquired depends very largely upon the recognition of the essential relations of that knowledge to other knowledge—especially that of form to content. Thus it happens that a little well-related knowledge is of more practical value than an incoherent mass. Nor are the logical order and systematic sequence of the various parts of the formal studies disturbed. As before there must be the speller, reader, arithmetic, the writing lesson, etc., but a better series of these—one which proceeds *pari passu* in connection with the life of the child and which is but the objective expression of that life.

Question.—Does it prevent formalism and the tendency to "machine" teaching?

Answer.—It does; a "machine" cannot see relations, much less lead others to see them.

The reorganized curriculum is a revelation to the teacher. It is the New Testament of education, and we know from experience and the testimony of others that teachers dead in

the trespasses and sins of formalism have been raised to walk in newness of life.

It is important to remember that only *essential* relations are referred to. Trivial or accidental connections would lead to caricature. For example, suppose that a teacher in assigning a lesson in nature study to "correlate" with the battle of Trenton in history should say, "For our lesson in science tomorrow we will notice the Hessian fly."

Question.—(a) Does it provide a more wholesome field of content and (b) is greater interest stimulated thereby?

Answer.—(a) It does. (b) There is.

Question.—Does it call for teachers of a more liberal culture?

Answer.—It does.

We cannot raise the school without raising the teacher. We cannot raise the teacher without raising the scheme of instruction—without offering a higher view of the world order. The teacher cannot make study reveal that of which he himself is unconscious. In order to teach others to come into intelligent relations with their natural and spiritual environment the teacher must be thus related.

So much for the answers to these questions. Though not all equally emphatic they are positive in the same direction. The full tale, of course, cannot be told. Expression of opinion, progressive and conservative, has had free play. Both have disdained to pass final judgment, but each, recognizing in the other a necessary unit of force, constituting the general power which works out educational changes, has perceived that both may properly give full utterance to innermost conviction; and in venturing to express mine I think the following results are sure to follow any intelligent application of the principles of the scheme now proposed:

1. It will render the iniquities of formalism impossible.
2. It will insure teachers of a more liberal culture.
3. It will give the child growing insight into the stream of human culture, the nature through which it flows, and the reciprocal relations of the two.
4. It will make for character.
5. It will be economic. (In the sense of the term as used in political economy.)

6. It will omit no real good to be found in past systems.

And now that the first rash rush of the Herbartian invasion is past, and some sober concessions have been made for the sins of some of its youthful exponents, and some misapprehensions cleared away, this new movement begins to be welcomed as but the necessary re-adaptation which orderly progress in education demands.

A CRUSADE FOR EVERY DAY.—HONESTY AND TRUTHFULNESS.

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Eminent speakers and writers have iterated and reiterated the statement that our public school system was inaugurated, not so much to make business men, professional men and scholars as to make good citizens. Accepting this as true, we may ask: (1) What are some of the ingredients in good citizenship? (2) Are these elements lacking among our people? (3) If so, what can be done to secure them?

First.—Ingredients of good citizenship. The politician and "Fourth of July" orator will tell you, 'tis patriotism, readiness to defend your country, sword in hand, etc., yea, even readiness to die for one's country. This is all well enough when the occasion demands, but happily occasions seldom come when it is necessary to prove your good citizenship by the sword, and we pray that the occasions may become fewer and fewer as the years go on. While we accept the above as one of the ingredients in extreme occasions, there are others for use on all occasions. Among these we find industry, economy, sobriety, candor, honesty and truthfulness. All these and more are needed for the full measure of good citizenship. We are, however, on this occasion to deal with the last two, namely, honesty and truthfulness.

Second, we are to see as above indicated that these qualities are wanting among our people. It takes but little investigation, at most but little experience in dealing with men to be assured of this fact. That fact, that sad fact, reveals itself in nearly all walks of life. Instances are almost too numer-

ous and too obvious to need mention. Instances like the following are without number:—Hire a man to do a small job of work at a given hour. He promises definitely, and you put aside your regular work to be present to direct or help. You go to the place a mile or two distant, promptly on time, but no workman. You wait an hour, two hours, yet no workman. You go to his shop or home and find that another had offered him a little better job and that ended all.

You buy a load of corn, hay or wood and fix the day and hour of delivery, and remain at home to see to proper placement of the article. The hour comes and goes, and no load; another hour with the same result. Meeting a neighbor next day and narrating your disappointment, he surprises you by telling you that he saw the same man sell his load to another party, for \$7.25 which proves to be 25 cents more than you were to pay. This twenty-five cent gain explains all; this *great* gain is entirely a sufficient reason (in his estimation) for breaking his promise and leading to the waste of your time in waiting and probably to a much larger waste in making a second purchase of the article wanted. Again you are to pay a small debt, say \$40 on a certain day. In order to make this payment you must make a collection of \$20 from Mr. A, one of your debtors. You call on him and ask him if he can make payment by such a day. He very promptly answers, yes. You, with great caution, emphasize your need, saying this amount is to help you keep your promise in making payment to Mr. B. He says all right. You go about your business resting easy as to both his payment and yours; but when the day of the payment comes, behold no man, no money, not even an explanation. 'Tis a broken promise, business dishonesty and nothing less. Only one day till your promise is due and you in school or otherwise engaged so as not to be able to go out and hunt up some other creditor, or make sale of goods, chattels, etc., and hence a great sacrifice on your part, or a failure to keep your promise. This both annoys and humiliates you, but the matter does not end here. Your creditor had promised \$500 on the day after you were to pay him. Your failure to pay him compelled his failure to pay \$500 to another creditor and this creditor failed for \$3000 to a third, and thus this seemingly endless chain goes on until a merchant is broken

up or a factory shut down. This chain, as others, was no stronger than its weakest link, and that weak link was the lack of honesty in the little sum of \$20.

These are only types of what is occurring almost every week in every business community. While these are serious, there are others often much more serious. Among these are exaggerations and misrepresentations, not to say falsehoods, in business advertisements, as "best in the city, or state," "cheapest in the state," "largest house in America," "closing out at cost," with no thought of either closing out or selling at cost, and thus on to the end. Added, are the broken promises of politicians, office-holders, and added to these are bought voters, bribed witnesses, perjured jurors and thus on till you are ready to exclaim with David, "All men are liars;" or standing on the more appreciative side, you say with Pope, "An honest man is the noblest work of God." Without further enumeration, we think the evidence sufficient, painfully sufficient, to prove the fearful lack of honesty and truthfulness.

Third, what can be done to secure these virtues, the virtues of common honesty and truthfulness? Writing for an educational journal you almost anticipate the answer, namely, let these be faithfully and rigidly taught in the public schools. Were we defining the work of these schools we would say, morality in general, including the fundamentals of Christianity, but as this is wide of our intent, we limit our discussion to the theme in hand, namely, honesty and truthfulness. Without argument as to the mode of this work or its efficiency it is enough to state the almost axiomatic truths:—"Train up a child in the way he should go and when he is old he will not depart from it."

" 'Tis education forms the common mind."

"As the twig is bent, the tree's inclined."

What you want to appear in the life of a nation should be put into the schools of that nation.

Hence let the above named virtues be ingrained through the school life; and they will crystallize into character in manhood, and as a consequence, we shall have a generation of honest dealers and truth-tellers. What a "consummation" and how "devoutly to be wished." What a relief would come

to the business world. What safety to government. What trust among neighbors. What sweet confidence in cherished friendship and plighted vows.

Teachers, will you consider and see what you can do in developing in your pupils, sterling honesty and rigid truthfulness?

"Provide things honest in the sight of all men."

"Lie not to one another."

SHAKESPEARE.—THE TEMPEST.

The *Tempest* is one of the most beautiful plays of Shakespeare as well as one of the most suggestive. It contains much of the serious and some that is tragic in character, yet owing to its harmonious and happy termination it is a comedy.

RUNNING COMMENTS ON ACT I.

Scene 1.—The action of the *Tempest* opens directly, if not to say abruptly, without any prologue, or anything else of a preparatory nature. In the very opening of the play we find ourselves on a ship at sea, in the midst of an excited company of sailors and passengers, struggling with the storm for their lives. It appears in this short scene that there are on board the ship, Alonzo, king of Naples, his son Ferdinand and his brother Sebastian, together with Antonio, the then Duke of Milan, Gonzalo and others. Further along in this play we learn that this company are returning from Africa where they have been to attend the wedding of Claribel, daughter of Alonzo. We are also to learn that most of this company have been, and all are yet to be, brought into close relation with Prospero, the ruling character of the play and his daughter Miranda. The storm-scene is of interest to us, chiefly on account of its connection with the later developments of the play. And it is also worthy of note that a careful study of its language has lead an eminent critic to declare that the words have been used with such accuracy as to warrant the inference that the scene was written by an experienced sea-captain.

Scene 2.—In this scene we are on a lonely island with Prospero, an old magician, and his daughter Miranda. They are

observing the fate of the storm-tossed ship. We are informed at once that Miranda knows of her father's magic power, for the scene opens by her intimating to her father that it is by his art that the wild waters roar, and asking him to prevent the destruction of the ship and those on board

"I have suffer'd with those that I saw suffer"

expresses to us the sympathetic nature of Miranda. Prospero's reply fully assures us that he possesses more than ordinary power, for he tells her that no harm shall come to any one. We learn also that the chief end of the old man's life is now the welfare of his daughter,

"I have done nothing but in care of thee."

He takes this as a fitting time to inform Miranda who she really is and what her father once was. It appears that Prospero has often begun to tell Miranda the story of their lives and as often stopped without concluding.

"But the hour's now come;

The very minute bids thee ope thine ear;"

He tests his daughter's memory of her early life and finds that all she could remember of her life before they came to this island was that when she was a little child four or five women tended her. Prospero now tells her for the first time that twelve years before he had been the "Duke of Milan and a prince of power." At first she is unable to understand this and then exclaims:

"O the heavens!

What foul play had we, that we come from thence?

Or blessed was't we did?"

Here comes the suggestive reply:

"Both, both, my girl."

So it is, I think, with every misfortune of life. While it seems a misfortune, we may, nevertheless, so control it as to make it an instrument in achieving a better fortune.

Prospero relates how he had been the prime duke of Milan and had been held in honor for his learning in the liberal arts; how he was so rapt in secret studies that he became a stranger to the affairs of state and turned its management over to his brother Antonio.

"I thus neglecting worldly ends, all dedicated

To closeness and the bettering of my mind,

With that which, being so retired,

O'er-prized all popular rate, in my false brother

Awaked an evil nature."

Prospero's confidence in his brother was without bounds. But confidence will awake evil in an evil nature. So it did in Antonio. He took advantage of his brother's ignorance of state affairs and by the bestowing of office and the giving of tributes he secured the co-operation of some subjects and even the king of Naples in his plan to take the dukedom from Prospero. Here we must keep in mind two points: First, the evil consequences that came to Prospero were caused by the evil purposes of Antonio, who therefore is to be blamed for these consequences. Second, the loss of Prospero's dukedom was occasioned also by neglect on his own part. He, too, must therefore be held responsible. While we live in the world we cannot altogether neglect worldly ends. The love of books is most commendable. It may nevertheless be so in the extreme as to unfit one for any position requiring executive ability and great activity like the management of an institution.

Antonio and Alonzo, fearing the wrath of the people, did not take the lives of Prospero and Miranda, but "one midnight," sheltered by "the dead of darkness," carried them some leagues out into the sea and then put them into a rotten carcass of a boat and left them

"To cry to the sea that roar'd to us; to sigh
To the wind, whose pity, sighing back again,
Did us but loving wrong,"

Antonio had thought, of course, that certain death would overtake them, but "by Providence divine" they came ashore on this magic island. Human will does much but Providence too, plays a part in life.

A noble Neapolitan, the good Gonzalo, a dear friend to Prospero and his daughter, had taken the precaution to provide them with garments, food, water and other necessities, and also to put into the boat some of the most valuable volumes from the old man's library. Here on a lonely island, cut off from all civilization this old man, from the richness of his own mind and with the aid of his treasured books, gave his daughter a better education than that which is commonly secured by a princess. Miranda is deeply interested in the tale, but is unable to keep her thoughts from those who are suffering on the sea and begged her father to tell her his "reason for raising this sea-storm." He tells her that by

strange accident, Providence again, his enemies have

"Been brought to this shore; and by my prescience
I find my zenith doth depend upon
A most auspicious star, whose influence
If I now court not, but omit, my fortunes
Will ever after droop."

This thought has universal application. By the strangest accident opportunities are thrown in our way, which, if we improve will lead to our fortunes, but if neglected will lead to downfall. This is not the only place that Shakespeare tells us

"There is a tide in the affairs of men,
Which taken at the flood, leads on to fortune;
Omitted, all the voyage of their life
Is bound up in shallows and in miseries."

Here Miranda falls asleep and the delicate spirit Ariel approaches to tell his master how well he has done his bidding in the management of the tempest.

"I boarded the king's ship; now on the beak,
Now in the waist, the deck, in every cabin,
I flamed amazement; sometimes I'll divide,
And burn in many places; on the topmast,
The yards and bowsprit, would I flame distinctly,
Then meet and join. Jove's lightnings, the precursors
O' the dreadful thunder-claps, more momentary
And sight-outrunning were not: the fire and cracks
Of sulphurous roaring the most mighty Neptune
Seem to besiege, and make his bold waves tremble,
Yea, his dread trident shake."

In the midst of this terrible storm we do not feel that any harm is to go to those on board the ship. To us there is nothing frightful about it. It is not intended to produce the feeling of tragedy. Ariel assures us

"Not a hair perished;
On their unstaining garments not a blemish,
Fresher than before."

Neither is the ruling character, Prospero, actuated by the tragic spirit. He has been deeply wronged, but he desires to reform rather than to destroy the authors of his misfortune.

The ship is safe in the harbor and the mariners are stowed under hatches. The various members of the royal party were landed in groups, except Ferdinand, the king's son; he was placed by himself. It seems there was an entire fleet accompanying the king's ship; but when it was caught in such a

terrible tempest and seemed to be lost, the other ships started on their return to Naples. Here Prospero asks the spirit Ariel to do more work, but Ariel claims he has done enough and demands his liberty. A quarrel arises, the meaning of which I leave for a future article. Ariel finally consents to go on another mission and the old man directs him to make himself invisible to all but himself and Prospero and go to bring Ferdinand into the presence of Miranda. While Ariel is gone Prospero and the monster Caliban engage in a quarrel, which also I shall explain later. By means of music Ariel, though invisible, leads Ferdinand into the presence of Prospero and Miranda. Miranda is much pleased with Ferdinand's brave form, but thinks he is a spirit, "a thing divine," and he thinks her a goddess. From their first exchange of glances springs a mutual admiration, which, it is worthy of note, increases when they discover that they speak the same language and belong to the same country. It was wrong for Desdemona and the Moor to marry and natural that both should pay the penalty. Old Prospero is anxious for his daughter to become queen of Naples and his profound study of books has given him such an insight into nature as to make him know that the best way to further this design was to seem to oppose it. So he speaks harshly to Ferdinand and calls him a traitor, having come upon the island as a spy to win it from Prospero. He puts Ferdinand to work and tells him he shall have no food but withered roots and husks and only sea-water to drink. The principle according to which Prospero does this, is that we value highly that which costs us labor, and lightly the prize that is easily won. This not only increases the estimation in which Ferdinand holds the prize he is winning, but increases also Miranda's affection for him and makes her exclaim—

"Beseech you, father, I pray thee, I'll be his surety."

Miranda speaks not for herself alone, but so far as I know, for all the good women of Shakespeare, when she gives the ground of her love for Ferdinand in

"He's gentle and not fearful."

PRIMARY DEPARTMENT.

Edited by MRS. SARAH E. TARNEY-CAMPBELL, Supervisor of Instruction in the
Anderson Schools.

LANGUAGE.

One idea kept in mind in the language work throughout the grades is that it should bear largely on the regular work done in other departments of the school. The prevailing idea is that the good use of language comes from using it under similar stimuli to that when under ordinary out-of-school circumstances the pupil undertakes to set forth his thought on something concerning which he is already acquainted or in which he is interested and with which he hopes to be acquainted.

There should be very little work done in which the language form itself stands out as the thing to be mastered. Indeed, even the form cannot be carefully mastered if the pupil is wholly intent upon the form.

The following outlines of the "compositions" which some of the different grades have followed are here given. These are only individual notions of what these particular teachers felt their pupils would be helped by considering. These are only given as suggestive of what some teachers have found an ordinarily profitable course, at least. The language of the first year is entirely incidental to all the other work.

SECOND GRADE.—*September.*—Aster and golden-rod. (Oral and written.) Corn. (Oral.)

October.—Trees—maple, hickory, oak, willow. (Oral and written.) Milk-weed. (Oral.)

November.—Thanksgiving—Origin, history and present observance. (Mostly oral.)

Nuts and burrs. (Oral and written.)

December.—The Christmas Story. (Oral.) Evergreens—pine, fir, cedar. (Oral and written.)

January.—Agoonack and her country. (Mostly oral.) Snow, ice, water, steam, etc. evaporation and condensation. (Oral and written.) Hiawatha's Childhood. (Oral and written.)

February.—Continuation of Hiawatha. (Oral and written.) Washington, Lincoln and Longfellow. (Oral and written.)

March. Flowers—pussy willow, red maple, and hazel. (Oral and written.) Buds—cherry. (Oral.)

April. Growth of bean and pea from seed. Wild flowers. (Oral and written.)

May.—Continuation of April work with stories and poems. (Oral and written.)

THIRD GRADE.—I. Reproduction.—1. Historical subjects: *a.* The Puritans and Thanksgiving; *b.* Birth of Christ.

2. Biographical:—*a.* Life of Washington; *b.* Life of Lincoln.

3. Literary.—Myths:—*a.* Hyacinthus and Apollo; *b.* The Golden Rod and Aster; *c.* Three Golden Apples.

2. Other short stories—from papers.

II. Picture Stories.

III. Scientific:—*a.* Autumn leaves; *b.* Golden Rod; *c.* The Bean; *d.* corn.

THIRD GRADE.—I. Plants:—*a.* Maple; *b.* Oak; *c.* Pussy Willow. Poems and Stories in connection with plants:—*a.* The Poplar; *b.* The Fir Tree.

II. Historical:—*a.* Hallowe'en; *b.* Columbus; *c.* Indians—oral; *d.* Puritans; *e.* Thanksgiving—oral; *f.* Christmas; *g.* George Washington—part oral; *h.* Abraham Lincoln—oral; *i.* St. Valentine's Day; *j.* St. Patrick's Day.

III. Animals:—*a.* Gall Fly; *b.* Squirrel.

IV. General subjects:—*a.* Rainy Day, poem in connection with it; *b.* The Snowflake's Story; *c.* The Kitten's Story; *d.* Signs of Spring; *e.* The Rain-drop's Home; *f.* The Water Parting—oral.

Besides these subjects given, selections bearing upon these subjects were at least read and reproduced orally.

FOURTH GRADE.—1. The Fly:—*a.* Parts; *b.* Uses.

2. The Skeleton: *a.* parts; *b.* uses.

3. The motions of the earth; 4. A trip to the Nile; 5. Nile Valley; 6. A trip to Hawaii; 7. My trip to the Moon, (imaginative); 8. Story of the Pilgrims; 9. Story of Thanksgiving; 10. George Washington; 11. Janus.

12. Reproduction Stories:—*a.* The Little Match Girl; *b.* Kay and Gerda; *c.* Rescue of Kay; *d.* Mary and Nelly; *e.* The Queen Bee.

13. Picture Stories:—*a.* Little Barefoot; *b.* The Guardian Angel.

FOURTH GRADE.—*September.*—Story of Vacation; Clytie.

October.—Columbus: Discovery of America.

November.—The Oyster; Plum Pudding; Thanksgiving.

December.—The Pilgrims; Story of the Christ-Child; The Mistletoe.

January.—Winter; St. Christopher; King Midas; Hercules.

February.—Abraham Lincoln; The Merry Ride—picture story; The First Flag—picture story; The Palm.

March.—Letters to friends, sometimes describing parts of the country about which we have been studying in geography; Story from a picture; The Golden Fleece.

April.—Beginning a composition on the Pussy Willow.

FIFTH GRADE.—I. Geography and History:—*a.* Washington City; *b.* The Main Street School; *c.* The Plymouth Colony; *d.* Christopher Columbus.

II. Reproductions:—*a.* Little Boy Blue; *b.* St. Valentine's Day; *c.* Moral Story.

III. Science:—*a.* Silk; *b.* Wheat Plant; *c.* Corn Plant.

IV. Letters—*a.* Geographical Letters; *b.* Letters to friends; *c.* Business Letters.

FIFTH GRADE.—I. Historical:—Thanksgiving; The Pilgrims; Washington; Pestalozzi's school; Liberty Bell.

II. Geographical.—Nature:—Story of the Setting Sun, The Bison; The Snowflake; Indian corn; A Drop of Water; Pine Forests.

III. Literary:—The Cloud and Fountain; Jack and Joe's Visit; Story of Gerda, (Reproduction); Dickens' Christmas Carol, (Review); The Looking Glass; The Snow Queen, (Reproduction); How the Pony Learned a Lesson, (Reproduction.)

SIXTH GRADE. I. Historical:—*a.* First Christmas Tree in New England, *b.* Columbus; *c.* Plymouth Rock; *d.* Mt. Vernon; *e.* Abraham Lincoln; *f.* George Washington.

II. Geographical:—*a.* The Cotton Plant; *b.* Description of Mt. Vesuvius; *c.* Description of two or three pictures pertaining to the geography work; *d.* The Yosemite.

III. Literary:—*a.* The Stone Face; *b.* Reproduction of several myths—Hermes; *c.* The Robin and the Violet;

d. Paradise of Children; *e.* The First Christmas Tree—Field's; *f.* An Original Story—A Boy is known by his friends.

- IV. Miscellaneous:—*a.* Description of a Violet; *b.* Of an Apple Tree in Blossom; *c.* Several Letters—business and friendship; *d.* Description of pictures:—one, patriotic; one, newsboy.

SEVENTH GRADE.—I.—Reproduction.—*a.* The Complaint of the Wild Flowers; *b.* The Conceited Apple-Branch.

II. Review:—Evangeline.

III. Compositions: *a.* Plymouth; *b.* The Cocoanut Palm; *c.* Cuba; *d.* Cotton.

IV. Letters:—*a.* Four business letters concerning the sale and purchase of a certain piece of property; *b.* Letters from European cities in connection with the study of the geography of Europe.

V. Biography:—Alexander Hamilton.

VI. Description of pictures:—*a.* An Arctic Landscape; *b.* The Falls of the Rhine.

EIGHTH GRADE.—The following outline of the composition work for an eighth grade is copied directly from the teacher's note-book. This, of course, does not indicate any of the grammar work done, but the constructive work of the class only. The teacher allowed two days out of every week for this work. It is readily seen that in the main the work reinforces the other work of the school.

1. Geography of Cuba. (A map is drawn in connection with the description.)

2. History of Cuba.

3. Thanksgiving. (Illustrated. Each pupil designs his own illustrations.)

4. A business letter, a formal invitation, an acceptance and regret.

5. The front view of Masonic Temple. Description. (Will read to the pupils a description of St. Peter's Cathedral to give them a good model.)

6. Christmas.—(In connection with this will study a copy of one of the Madonnas.)

7. A series of business letters concerning the sale and purchase of a piece of property.

8. The Journey of a Piece of Bread and Butter. (Original drawings are to accompany this.)
9. A Piece of Carbon. (Show the likeness and difference between a diamond and a coal, both in process of formation and present characteristics.)
10. A Fable. (Original. The pupil is to employ a simple form of argument.)
11. Our Constitution.
12. Cotton. (Illustrated by original drawings.)
13. Gems of thought from great authors.
14. Your impressions of Lady of the Lake. (This poem is one of the principal things read this year.)
15. Abraham Lincoln.—Biography.
16. Alcohol.—Nature and effect.
17. Current events for a week.)
18. Some modern inventions.
19. The composition of six weeks in the spring on the maple and cherry, with illustrative drawings every week to show development.

SPIRIT OF INVESTIGATION.

"In what books will I find something that I can read to the children on birds—whether they come back in droves, pairs, or singly; where they build their nests and the materials used; what birds builds nests first; which come first, bugs, insects and worms, or the birds that eat them? I don't know these things myself, and if the children don't know them I want to be able to tell them. They will be sure to give different answers and I ought to be able to settle these differences."

This it seems to me indicates a mistaken notion of the ends to be reached in the Nature work in the grades. To be sure, we do want the children to master some of the obvious facts and to feel sure of them. But the higher end is to lead the children to a careful, systematic and sympathetic observation of the phenomena around us. It is to cultivate in these little people a spirit of genuine investigation. The very thing which we wish to discourage is jumping at conclusions on one hand, or being willing to accept facts

from the teacher without making any effort whatever to determine the truth of these facts. It is far more important in this Nature work that the children consider for the entire spring term the points raised by the teacher in question and not reach any absolutely definite idea, than it would be for the teacher either to tell the children, or to read to them from some book the answers to these questions. When the boys and girls leave our schools and find their lives entirely made up of the social and business environments of their community, they will not have some one to stand at their elbows and relieve them of all investigation and to decide the many perplexing questions that will arise. The school can do no greater harm to the child than to stultify this spirit of investigation, to make the child afraid to trust his own reason, and to make him incapable of reaching absolutely definite results.

So the question after all comes, What is the purpose of our Nature work? I am not sure that I can answer this completely, but I do feel reasonably sure of this, that the child's love for nature in all its manifold, mutual adaptations is to be increased. He is also to continue his child-like method of investigation that he pursued before he came into school—a continual questioning of every fact or phenomenon that he meets even if he receives no answer. He is to become stronger in his ability to watch the development and outcome of any train of facts; he is to be less inclined to accept the bald statement either from teachers or from books concerning phenomena that he has been observing. As I look at the purposes of Nature work, the value of many of the particular facts themselves is very little indeed when compared with the true life education which he should get from his observation. More than this, if the habit of thought just indicated is reached by the pupil, he for himself will continue his observations outside of school hours, and decide for himself the answers to the above questions.

THE ROBIN'S RED BREAST.

A long while ago there was only one fire in all the cold North Land and this was cared for by an old man and his little boy. There was one enemy to this fire, the great white

bear that lives where it is always cold. This old bear watched every chance to get close enough to the fire to put it out, and then he would have the whole North Land to himself. One day the old man got sick and there was no one to care for him except his little son. It was very hard work indeed to care for the sick father and at the same time to watch the fire so that it would not go out and leave all the North Land to the great white bear. But one night the little boy was so tired and sleepy that it was impossible for him to watch the fire, and the white bear saw that the fire was becoming lower and lower. At last the bear ventured up to the fire and seeing no one around, he put his large, wet paws upon it and scratched out the coals and left it, thinking that the fire was out.

In the morning a gray robin flew past and was surprised to see that the fire was gone. It flew down closer to the ground and looking down into the ashes it saw one little, live, red coal. For hours the little bird patiently fanned this coal with its wings until a good fire was again burning. But the bird had hovered so closely over the coals that the gray feathers on its breast had been burned to a reddish brown, and in the morning as it flew away, at every place on the ground which the bird's breast touched there sprang up a new fire and soon all over the cold North Land there were bright, warm blazing fires. The white bear was compelled to go still further north, and he growled all the way as he went to find a colder climate. The people always bless the little bird that spread the fires all over their country, and every spring when the robin comes back they tell to their children this story of how the robin got its red breast.

LEND A HAND.

[This department is conducted by Mrs. E. E. OLCOTT.]

"Look up and not down
Look forward and not back
Look out and not in;
Lend a hand."

ALIUOT PARTS IN MENTAL PROBLEMS.

There is fine discipline in solving problems mentally. There is a stage of growth at which it is a pleasant task to

the child to reason: Since 10 oranges cost 20 cents then 1 orange will cost one-tenth of 20 cents which is 2 cents.

Greatly to be deprecated is drilling, driving, drudging analysis into luckless, immature brains until parrot-like tongues can rattle it off glibly. Temper such zeal with this thought from Jean Ingelow:

"The grass hath time to grow in meadow lands,
And leisurely the opal murmuring sea
Breaks on its yellow sands.
And leisurely should life and spirit grow,
With yet the time to grow and ripen free."

But when "the life and spirit are ripe" for such work, do not stint it. Aim first to secure thorough knowledge of the process and accuracy. When this is accomplished, lay the stress upon accuracy and rapidity. Teach quick ways, "short cuts" to results. One of the shortest cuts is a working knowledge of aliquot parts.

To illustrate, there is a long and a short way to solve: Two oranges cost 10 cents, what will a dozen cost? Long way: Since two oranges cost 10 cts., 1 orange costs $\frac{1}{2}$ of 10 cts. which is 5 cts., and a dozen will cost 12 times 5 cts. which are 60 cts.

Short way: Since 2 oranges cost 10 cts., a dozen will cost 60 cts. because 12 is 6 times 2. Therefore 12 oranges cost 6 times as much as 2 oranges. The result, 60 cts. is named first and the reasoning, the "because" follows, the aim being to train pupils to see a result quickly and surely.

The following show how the plan may be applied to a variety of problems.

1. If five boys earn \$11 a week, what will 15 boys earn? Solution:—Fifteen boys will earn \$33, because 15 is 3 times 5. Therefore 15 boys earn 3 times as much as 5 boys.

2. Twenty hens cost \$5, what will 4 cost? Solution:—Four hens cost \$1 because 4 is one-fifth of 20. Therefore 4 hens will cost one-fifth of \$5.

3. If $\frac{3}{4}$ of a farm are worth \$300, what are $\frac{1}{4}$ worth? Solution:— $\frac{1}{4}$ of a farm are worth \$200, because $\frac{1}{4}$ are 4 times $\frac{3}{4}$. Therefore $\frac{1}{4}$ are worth 4 times \$300.

4. One hundred yds. of calico cost \$8, what will $12\frac{1}{2}$ yds. cost? Solution:— $12\frac{1}{2}$ yds will cost \$1 because $12\frac{1}{2}$ is one-eighth of 100. Therefore $12\frac{1}{2}$ yds. cost one-eighth of \$8.

5. A certain sum at 10 per cent. yields \$120 interest per annum. What will it yield at 5 per cent? Solution:—It will yield \$60 because 5 per cent. is $\frac{1}{2}$ of 10 per cent.. Therefore the interest will be $\frac{1}{2}$ of \$120.

6. An investment of \$1200 yields \$300, what is the rate? Solution:—The rate is 25 per cent. because \$300 is $\frac{1}{4}$ of \$1200. $\frac{1}{4}$ of 100 per cent. is 25 per cent. When the interest is an aliquot part of the principal, the rate is the same part of 100 per cent.

7. Nine men do a piece of work in 2 days. How long will it take three men? Solution: It will take 3 men 6 days, because 9 is 3 times 3. Therefore it will take 3 men three times as long— 3 times 2 days.

At an examination the 8th problem was given to be solved by analysis. Part of the pupils solved it the long way and part the short way. Doesn't there come a time when the long way has served its purpose and pupils should be encouraged to dispense with it whenever the conditions of the problem permit?

8. Twenty-seven horses eat 5 bu. of oats in $\frac{2}{3}$ of a day. How long will it take 9 horses to eat 10 bu.?

Long solution:

- (a) 27 horses eat 5 bu. in $\frac{2}{3}$ da.
 1 horse " $\frac{1}{27}$ of 5 bu. in $\frac{2}{3}$ da. = $\frac{5}{27}$ bu.
 9 horses " $9 \times \frac{5}{27}$ " " " = $\frac{5}{3}$ bu.
 (b) 9 horses eat $\frac{5}{3}$ bu. in $\frac{2}{3}$ da.
 9 " " $\frac{1}{3}$ " " $\frac{1}{3}$ of $\frac{5}{3}$ da. = $\frac{1}{3}$ da.
 9 " " $\frac{2}{3}$ " " $3 \times \frac{1}{3}$ " = $\frac{2}{3}$ da.
 9 " " 10 " " $10 \times \frac{2}{3}$ " = 4 da.

Short solution:—

- 27 horses eat 5 bu. in $\frac{2}{3}$ da.
 27 " " 10 " " $\frac{4}{3}$ da.
 9 " " 10 " " $\frac{1}{3}$ da. or 4 days.

The pupils using the short solution noted in reading the problem that 10 was twice 5, hence the time consumed would be twice $\frac{2}{3}$ da., also that 9 was $\frac{1}{3}$ of 27, hence the time would be 3 times as long. Pupils beginning the use of aliquot parts in mental work, should briefly explain each step using "because" and "therefore" as in the first seven problems. The parentheses were used in the first seven problems to indicate that "therefore" etc. may be omitted except when additional proof is required that pupils understand how the

result was obtained. Teach pupils to be on the lookout in problems for relations in numbers which will permit the use of aliquot parts.

Most excellent desk-work for older pupils is to write original problems which may be solved the short way. These may be exchanged and solved by different members of the class. If the teacher keeps a copy of each, she will have a number of practice problems of special interest to her class.

DESK-WORK.—A LANGUAGE EXERCISE.

A pupil may have rules of grammar at his pen's end and yet break them all in writing. Or perhaps, he may write correctly and be unable to state a rule. In the latter case, he has, as it were, absorbed rules, so that he applies them unconsciously. For instance, when he began written language work, his teacher reminded him time and again that *I* must be a capital when it meant a person. By and by, writing it so became a habit, and he forgot the reason. Now he writes correctly the sentence: This letter is small *i* and I can write it; but cannot tell why the *i*'s should be written differently. Ignorance of the rule in this case seems to matter little since he uses the correct forms. But other cases will arise where his previous practice may be an untrustworthy guide, and where to work intelligently he needs a practical knowledge of applying rules.

To use a simple illustration: In the primary grade he may have written

The mans are riding.

The mens have straw hats.

and under the teacher's direction, corrected the errors and absorbed the thought that adding *s* to a word is not always the way to make it mean more than one. He half unconsciously decided that *mans* and *mens* do not sound right. But, in a few years, he needs to use *man* and *men* in the possessive case. "The man's hand" does not sound amiss because he frequently hears the possessive form of the singular, but the less familiar possessive plural, "the men's hands," makes him hesitate because the sound grates. He is in the same dilemma as the man in the old story who not knowing

whether to write, "Send me two tailor's geese" or "Send me two tailor's geese," wrote, "Send me one tailor's goose and then send me another." He needs to know a rule and how to apply it. He should know and know what he knows.

One of the simplest kinds of language work is forming plurals. More difficult work is writing the singular and plural of nouns used in the possessive case. Exercises along lines similar to those suggested below will help pupils sufficiently advanced for such work, to apply rules both consciously and unconsciously.

I. Most nouns are made plural by adding *s* to the singular.

II. In some nouns, the last sound will not unite with the sound of *s*, then *es* is added to the singular.

III. Nouns ending in *y* preceded by a consonant, change *y* into *i* and add *es*.

IV. Some nouns form their plurals irregularly.

(a) Write the plurals of the following nouns and place them in four groups, giving the rule applying to each group: mat, man, box, ox, cow, sky, woman, church, berry, boy, foot.

(b) Illustrate each of the four rules by not less than three words not found in the list above.

(c) In the following change the nouns in the singular to the plural number and write the sentences correctly:

1. This man is ambidextrous.
2. A llama is a South American camel.
3. A mouse is a rodent.
4. A rodent is a gnawing animal.
5. An ox is a ruminating animal.

6. A TRADING STORY.—A child gave a penny for a little box. He swapped the box to a lady for a cotton flannel mouse. The mouse was traded for a little wooden goose and the goose for a tin ax. The ax was swapped for a candy strawberry. The child ate the strawberry and wished he had his penny again.

(d) Write the singular and plural forms of *nouns* that *rhyme* with the following words:

nice	very	den	grouse
shy	laden	piece	this

(e) Write the plurals that you formed in (c) and (d), placing them in four columns according to the rule which they illustrate.

NOTE.—(d) may be written thus by the pupils:

nice—mice, mouse.

den—men, man.

shy—fly, flies.

piece—geese, goose.

very—cherry, cherries.

grouse—house, houses.

laden—maiden, maidens.

this—kiss, kisses.

In (c) the words ambidextrous, llama, rodent, and ruminating, were introduced to make the sentences more than a mere exercise in forming plurals. A little explanation adds a knowledge of these words to the pupil's store of general information.

DEPARTMENT OF PEDAGOGY.

Conducted by ARNOLD TOMPKINS, Chair of Pedagogy, University of Illinois, at Champaign.]

MEANS OF TESTING EDUCATIVE WORK.

The work of a machine is easily tested; but school work is too subtle, pervasive and indefinite to yield to any standard of accurate measurement.

A machine exhausts itself in some external product; and is wholly tested in such product. The binder binds the grain, the loom weaves the cloth, the mill grinds the flour, the engine draws the train; and in noting such facts the machine in question is tested. If the knife cuts well it must be a good knife; and it is easy enough to ascertain whether it does so.

In all such work the product stands over against and apart from the instrument by which the work is done. The product can be inspected, and the machine pronounced good or bad without making any analysis of the machine itself. But in an organism the work identifies itself with the organism. The product of the activity of the organism is the organism itself. It is all at once agent, activity and product. True, an organism may be referred to an end beyond itself, as the ox for food and the oak for lumber; but the work of the organism is primarily the ox and the oak. The biologist takes the organism on its own ground and on its own account, and considers it as an outgoing activity which returns to itself. All its attributes and parts are intrinsically related; and all work done is measured in terms of the organism itself.

The individual to be educated is a peculiar kind of organ-

ism; he is conscious that he is the object of his own action; he is the self-conscious object of his own activity. He knows that he determines and is determined by his own activity. The subject which acts is the conscious object of the action; subject and object are one. The starting point of all education is the fact that the person to be educated is the organic unity of subject and object. Man finds something within himself for which to labor. The school is instituted in obedience to the desire to find that something. Thus while the lower forms of life seek the good of the organism through blind impulse, man seeks it by rational insight. He, by conscious plan and purpose, seeks his own highest good; strives by foresight to realize the highest possibilities of his own nature—to realize humanity in himself.

Man's activity may have external reference, as may that of any other organism; but man as man is an end in himself; otherwise he is a thing, not a person. In fact, man can realize his own highest good only by losing himself in objective ends. Self-realization is by the process of self-sacrifice. The objective end sought appears, after reflection, to be a means to an end in man. Man builds railroads, carves statues, and frames constitutions in self-forgetfulness; for he must lose his life in these things in order to find it. Altruism is the law of egoism. The external products to which man is instrumental are themselves only instruments to man's well-being. The fundamental error in education has been that man is a mere instrument serving the industries, the church or the state. The history of education cannot be interpreted except by reference to this truth. The first question to ask about any theory or system of education is whether man is regarded as a means or an end. All down the ages we find one or the other of these theories in possession of the field. The present stir in Europe over industrial education is clearly marked in being controlled by one of these views. There is valid truth on both sides of this question; but when we seek the ultimate guiding truth no one questions the statement that "Self-realization, not self-preservation is the first law of life;" or that, "Education is not a preparation for life, it is life." The standard for testing educative work is, therefore,

that of self-realization—the universal standard for testing institutional work of any kind.

When will we come to the guiding faith in school work that the ever-present and inspiring motive to study is not in the consideration of the instrumental value of what is to be learned. The child makes marvelous progress during the first years of its life, while free from the constraint of practical ends. It must think, as it must breathe, or die. Its irrepressible activity is to it a good in itself; it is the manifestation and realization of its own nature, and as such is its own sufficient reward. The eagle does not soar on salary, but it soars, and fulfills its nature in that soaring. The nightingale sings not for head-marks, but that it may realize its nightingale nature. Man geometrizes because he is man, and not primarily to be engineer or architect. "God," who is under no industrial necessity, "geometrizes from all eternity." It is good to study the stars if one is not to be a sailor; and to be a miner does not exhaust the reason for studying geology. Man must think on these things because he is man—because he has the instinct of self-realization in him which urges him to seek his life in the thought and spirit of the world which lies about him. The soul has its own reasons for studying arithmetic, grammar, geography, history, etc.; these are to it forms of its own activity; faculties of its life; enlargement and realization of itself. If the teacher will seize this thought he will not stammer so much in attempting to explain why certain subjects of study and methods of work should be found in the school. It is easy to secure a place in the school course for those subjects which obviously have reference to an objective, instrumental product; as arithmetic and book-keeping, grammar and composition, spelling and reading; but drawing, music and the fine arts have to fight for their lives. It is easy, too, to support those methods of drill, however mechanical and deadening, which fix in mind facts directly applicable to external ends. The tendency is to emphasize that which relates to something other than the pupil's real self. We can scarcely take time to enjoy the wit and humor of an Irving or the subtle fancies of a Hawthorne. Irving tells us that after the Legend of Sleepy Hollow was related all the company roared with laughter except one practical gentleman

who asked what it all went to prove anyway. In school work we are always asking what it all goes to prove. Suppose it prove nothing; it may then prove everything. Can you not afford to stand and gaze into the "rosy depths" of the evening twilight? Look out upon the surging, seething ocean—out—out into infinity. And what does it prove? Nothing; but it is well for the soul to feel its own infinity through that of space. In speaking of reading Emerson, Lowell says that it is worth while to angle in those deep pools though one catch no fish for his basket, for there come inflated lungs and stimulated blood.

If school work always caught fish for the basket, or if the fish when caught were the best thing in the catching—which they are not, as every fisherman knows—then the testing of school work would be a simple matter. The formal examination would then have its supposed efficiency. The formal examination may ascertain the fish caught but not the inflation of the lungs and the stimulation of the blood in the catching. The finest results of teaching are immeasurable, imponderable, and non-percentable. The clumsy process of the examination which may be sufficient to test for mere intellectual products is wholly inapplicable to new modes and subtle ways of thought, to the prophetic visions of truth, and to the higher tone of life, which are stimulated by the highest art of instruction.

So strong is our belief that educative work can be mathematically tested that ability to so measure it is accepted as the first test of the work. This is implied in the demand for "results" in school work. This belief has forced us unconsciously to warp our school work to that which yields tangible products; even to the straining after particular forms of statements as given in the text. All mechanical and memoriter work in school has its origin in the belief that what the pupil learns stands some how apart from the learner and may be tested as can any other objective thing. We may expect to find the examination most in requisition where teaching is deadest and most mechanical. The best showing in per cents. may properly raise the suspicion of poor work. Questions that are perfectly answerable are not usually the best questions. The pupil may make perfect answer to the

question calling for the largest city in Illinois, but if the pupil be asked to state the influences which determined the growth of that city his answer must be imperfect. The lover of per cents. inclines to the former question, but there is more educative power in the latter. A study of the lists of examination questions reveals the fact that they are not adapted to search for the most vital things in education.

There is implied in all this that education cannot be tested in knowledge of subject matter. Education and scholarship must not be confused. The scholarship that is so often praised is nothing more than the undigested gristle of knowledge; and which cannot, therefore, re-appear as life. In mere scholarship the man seems to stand apart from what he knows; he is a machine which has ground out a given product. When a man is truly educated what he learns loses itself in the man, whence it will emerge again in every thought and act of his life. One does not think of Emerson, Beecher, or Phillips Brooks as men who had scholarship, but as sources of light and power. Mere scholarship fails not only to reach the real life and character, but in and through this fact it fails in the practical concerns of life. And we ought not be surprised at this, as we often are; for the very fact of scholarship explains the failure. The whole being of a man issues forth in every act he performs; and unless what he learns is transformed into the very substance of his life, it cannot reinforce him in the manifold emergencies of life. Hence to be a specialist in any department of labor requires the man behind the labor. To do anything intelligently requires the capacity to do a world of other things. The practical value of a subject cannot be tested by ascertaining whether a knowledge of it is directly applicable to the work to be done. Geometry may have disappeared from consciousness in the definite form in which the examination could test it; but it may yet be in the life as power through universal forms of activity. By a knowledge of Greek, the minister may explain his text, and thus make direct application of his knowledge; but unless his blood tingles with the life and spirit of the Greek so that his own English words are charged with convincing force his study of Greek availeth little to the purpose.

If school work cannot be tested by the examination and in

the form of scholastic products, neither can it be tested by the outer success of the after life of the pupil. Recently a distinguished gentlemen tried to convince an audience of the educative power of Greek by giving the case of a man who was a constant student of Greek while making his millions of money; and of the farmer who was a Greek scholar and who had outstripped his neighbors. In this argument there is first the unwarranted assumption that the cause of the success in each case was the power derived from the study of Greek. A little observation shows that the study of Greek and money-making are not so commonly associated as to warrant the inference of casual connection; rather they are so seldom joined as to indicate the absence of such connection. And what is still more unwarranted is the assumption that the value of Greek takes the form of some external product. Of course there is much in education that has value in relation to external success, and to that extent it can be so tested. An educated man farms, clerks, manufactures, teaches and preaches more efficiently than does the uneducated. In these days, one need scarcely take time to prove or to disprove this. It's no longer a question; it is a matter of every day observation. Besides, we know it to be true before hand; as we know the engine will start when the steam is turned on. But what we need to be reminded of constantly is that man is more than an instrument to these ends; he is not wholly a farmer, clerk, teacher, or preacher, he is a man. Man is above his work, and the best result of education is to keep him above it. What education must do is not to make of him a clerking man or a teaching man, but a man clerking, teaching, etc.

And have we not come upon the test sought? A test, however, which can be applied only in the long run. The tinkering, testing methods of the school room are of no avail here. But if in after years we find the child grown to the full stature of man, self-centered and poised in his manhood amidst the busy strife of the world, though he be as improvident and as impracticable as a Bronson Alcott, we must conclude that some educative influence or other has done its work well. Because the present age glories in its educational achievements, it cannot for that reason, feel triumphant in its

educational progress. The Greeks not only had no Pullman trains, but they had not even knives and forks. Is it then that our teaching is so much better done than that of Socrates in the streets of Athens; of Plato in the groves of Academe; or of Aristotle while walking up and down the shady porches of the Lyceum? There can be no answer till our hustling American steps out into the arena and measures strength with an old Athenian for simple manhood.

But the teacher, in the daily work of the school room, needs an immediate test of value. He must have the immediate satisfaction that while the work is being done it is well that it be done. There must be an immediate pledge of educative work—some outer manifestation of the inner educative process. *This is the manifest joy of the work itself.* If the class is spell-bound during the course of the recitation, we need no further objective proof of the value of the recitation; and if the hour be a tedious and tasteless one something must be wrong. I have no reference here to the feverish excitement that comes from artificial stimuli; but from the joy inherent in the work itself—the joy of mental life and activity. Happiness has its source in the life of thought, and becomes an index to that life. An hour spent in the glow of thought is felt to be an hour worthily spent; and it is so. If the pupil feels—and this he will manifest—that the work is stale and unprofitable it must be so to him. If at the close of the day, the pupils can say that this has been a good day, it has been so. Pupils in the school room ought to be as joyous all day long as the birds that sing in the tree-tops about them. When the school room awakens the sense of lesson task and imprisonment, as with Irving when he envied the bobolink which was all joy and song and sunshine, something is wrong.

This test of school work grows immediately out of the standard of self-realization, already set up. The deepest instinct of the soul is that of self-realization; and whenever, through the activity of the mind, there is a sense of self-realization there is involved a deep feeling of pleasure. In fact the division of feelings into those of pleasure and pain—the most fundamental division—is made on the basis of their relation to the interests of life. "Pleasurable feeling

is the rendering manifest to the soul its own activity in a direction tending to increase of well-being, or self-realization; painful feeling the reverse." The soul feels that it has possibilities which are limited by its finiteness, and every time it removes a limit by its activity there arises a feeling of freedom and joy. This feeling is the fundamental pleasure of life, and must arise with every effective act of instruction. In every act of teaching—in every question asked and in every direction given—the teacher is seeking to bring the pupil into a consciousness of some limitation and thus prompting him by his own activity to release himself from such limitation. At every stroke of the teacher some ideal is to become real. The process of instruction brings the pupil through a constant succession of new births, he constantly rises upon his dead self to better things. Joy is intrinsic in the process. The outburst of joy in the successful solution of a new problem is the announcement of a new birth of the soul. The revelation of new truth is absolutely intoxicating. I have known students to disturb their neighbors in the late hours of the night when they had risen to some new height and vantage ground of thought. Surely there is no joy like the joy of genuine thinking. "A lyric conception * * * hits me like a bullet in the forehead. I have often had the blood drop from my cheeks when it struck, and felt that I turned white as death. Then comes a creeping as of centipedes running down the spine—then a gasp and a great jump of the heart—then a sudden flush and a beating in the vessels of the head—then a long sigh—and then a poem is written." Such are the symptoms as the poet sees them. The pupil may not always feel centipedes running down his back, and turn pale and sigh and gasp, but there are just as unmistakable signs that something has happened by way of regeneration.

In conclusion, let us have more faith and less testing. When the pupil is stirred by a noble thought why should we go about fishing for the thought that stirred him? When the pupil has formed the great picturesque and sublime panorama of history and has traced out the logic of events, let him go in peace. In reading Enoch Arden, the pupil is touched with pathos and stirred with heroic strength of manhood; have we not faith that it will bear its fruit, so that we need not keep snatching at it

to see if it be still there? In a few years, the battle and poem will have disappeared from consciousness, but not from life. We must snatch at them quick if we would test them by our clumsy methods of measurement. Where are the eloquent periods of the orator, and the inspired verses of the poet that thrilled us in our youth? The singer and the song may long have been forgotten, but their indefinable presence remains. The experiences of the soul are as immortal as the soul itself. After an experience the soul is never just what it was before. When the teacher touches the life of the child in the recitation, he touches it for all time. While the particular cognition involved will, perhaps, shortly disappear forever, there remain quickened faculties and awakened powers, with a keener relish for truth and a higher sense of the worth of life. The perishable alone can be tested by the ordinary processes, and it is scarcely worth the testing. For the other, there is only the joy of doing and thinking and living. It is faith in work that yields no tangible product that saves the school; it is the sceptical and materialistic grasping for definitely rounded product that prompts the deadening, mechanical routine of the school room, yielding those definite facts so much prized by those who have none other but an arithmetical measure for the soul's life and growth.

Shall we then say that, negatively, the test of educative work is the fact that it cannot be measured by any definite external standard; and, positively, that its value is arrived at by the intuitive sympathy of the teacher with the pupil in the joy of life in the work he is doing? The only test of life is life itself.

MEMORIAL DAY PROGRAM, MAY 30, 1868.

G. A. R. GENERAL ORDERS, }
WASHINGTON, D. C., MAY, 1868. }

The 30th of May, 1868, is designated for the purpose of strewing with flowers or otherwise decorating the graves of comrades who died in defense of their country during the late rebellion, and whose bodies now lie in almost every city, village and hamlet churchyard in the land.

* * * Let us, then, at the time appointed, gather around their sacred remains and garland the passionless mound above them with the choicest flowers of spring-time; let us raise above them the dear old

flag they saved from dishonor; let us in this solemn presence renew our pledges to aid and assist those whom they have left us, a sacred charge upon a nation's gratitude, the soldier's and sailor's widow and orphan.

It is the purpose of the commander-in-chief to inaugurate this observance with the hope that it will be kept up from year to year while a survivor of the war remains to honor the memory of his departed comrades.

JOHN A. LOGAN,

Commander-in-Chief.

(Memorial Day was established by act of Congress in 1874—May 30th still held as the date.)

1. SONG—"Decoration Day." - - - - - *Air—America*

This is a day of peace,
Let party hatred cease
And bitter strife;
Let Peace her scepter sway
Throughout our land to-day,
May pride be swept away
And love be rife.

Long may our banner float,
O'er graves, near and remote,
Where rest the brave.
And while of them we sing
Our grateful offering
Of garlands bright we bring
For every grave.

2. RECITATION..... "Our Country and Flag"

(*Written for the Journal.*)

We hail thee, dear country
The fairest of lands,
We solemnly pledge thee
Our hearts and our hands.
Terrestrial Eden
Sweet home of the free,
Our hopes and affections
Are always with thee.

We hail thee, fair banner,
The red, white and blue,
We'll be to thy colors
Forevermore true.
Dear flag of our country,
Most honored shall be;
Where'er thou art floating
O'er land and o'er sea.

Dear Heavenly Father,
Accept this our prayer;
O take our dear country
Into thy kind care.
O, grant that our banner
May stand at all times,
For freedom and union
In all earthly climes.

Hanover Centre, Ind.

—J. Stommel.

3. RECITATION..... "A Little Child Shall Lead Them."

At last the Northerner spoke, talking more to himself than to any one else,—

"She used to come—my little girl, bless her heart!—every night to meet me when I came home from the fields; and she would stand under the great plum tree that's just beyond the back door at home, with the sunlight making yellow brown in her golden curls, and the laugh dancing in her eyes when she heard the click of the gate—I see her now—and I'd take her in my arms and she put up her little red lips for

kiss; but my little darling will never watch under the old plum tree, by the well, for her father again. I shall never hear the cry of joy as she catches a glimpse of me at the gate. I shall never see her little feet running over the grass to spring into my arms again!"

"And then," said the Southerner, "there's a little brown-eyed, brown haired girl, that used to watch in the cool afternoons for her father as he rode in from his visit to the plantations. I can see her face shining out now, from the roses that covered the pillars, and hear her shout of joy as I bounded from my horse, and chased the little flying feet up and down the veranda."

And the Northerner drew near to the Southerner and spoke in a husky whisper, "We have fought here, like men, together. We are going before God in a little while. Let us forgive each other."

When the next morning's sun walked up the gray stairs of dawn, it looked down and saw the two foes lying dead, with their hands clasped in each other, by the stream which ran close to the battle-field. And the little girl with golden hair that watched under the plum tree among the hills of New Hampshire, and the little girl with bright brown hair, that waited by the roses among the green fields of Georgia, were fatherless.—*Selected.*

4. ESSAY.....The School Flag.

5. READING.....Old Glory Lives On.

It is a question which no one can answer, what becomes of the flags which fly session after session over the two houses of Congress. The life of a flag exposed at such a height to the tattering winds naturally cannot be long. Every now and then, after a storm, a great rent is seen in "Old Glory" as it proclaims from the housetop that our statesmen are deliberating. Sometimes a stripe is gone, or perhaps, half the stars may be torn away. Then in a day or two it flies again with all its stripes and its stars, as if it had never suffered by the storm.

I asked what became of the old flags.

Nobody knew.

What do you do with them?

Nothing.

They are the same flags; that is, there are no new ones. The old flags are simply mended. There is a patriotic poem in this. "Old Glory" has a perpetual life; that is, the "Old Glory" that presides over the Capitol. When a stripe blows away, a new one is put in its place, and the same old flag is pulled to the head of the staff. If it is the blue field and stars that are gone, they are reproduced. If only a rent, it is darned; if a hole, it is patched. Then another stripe goes and a new one is added. So on, the old portions are blown away, the newer ones standing until the new becomes old in turn and tears away, and in endless revolution the old flag lives on. It is always the same flag, but from year to year its entire structure is changed and the small bits are blown away by the wind and other small bits take their place. There is no graveyard for Old Glory. It has perpetual life. No one

can tell when the flag which floats over the Senate was bought. It is still a perfect flag, but no part of what was first drawn to the mast-head is now in existence.—*Washington Star*.

6. RECITATION.....Bring the Sweet Flowers.

Leave not a grave in the gray of the twilight
Barren of flowers, o'er a hero at rest;
His was the gift of a life full of promise;
Small is the gift we may bring, at the best.

Think of the fond years he gave of his manhood;
Think of the hopes which were dead when he fell;
Think how he died, while he longed for some loved one;
Think of the anguish his lips could not tell.

Think what we have as the price of his off'ring;
Think of the flag that was saved by his blood;
Think what it might be, if he had not given
All that he had for his country and God.

Bring then the gift of the beautiful flowers,
Emblems of love, that their spirits may know
Hearts do yet burn when their deeds are recounted;
Hands are yet ready devotion to show—*P. H. Bristow*.

7. SONG—"Tramp, Tramp, Tramp.".....By the School.

In the prison cell I sit, thinking, mother dear, of you,
And our bright and happy home so far away;
And the tears they fill my eyes, spite of all that I can do,
Though I try to cheer my comrades and be gay.

CHORUS.—Tramp, tramp, tramp, the boys are marching,
Cheer up, comrades they will come;
And beneath the starry flag we shall breathe the air again
Of the freeland in our own beloved home.

In the battle front we stood where their fiercest charge they made,
And they swept us off, a hundred men or more;
But before we reached their lines they were beaten back dismayed,
And we heard the cry of vict'ry o'er and o'er. *Chorus*.

So within the prison cell we are waiting for the day
That shall come to open wide the iron door,
And the hollow eye grows bright, and the poor heart almost gay,
As we think of seeing home and friends once more. *Chorus*.

—*G. F. Root*.

QUOTATIONS FOR DIFFERENT PUPILS.

(NOTE.—If each child will come forward when he recites, bringing a flower or bunch of flowers, the whole can be carried later and placed on the soldiers' graves in the nearest cemetery. In many places it is customary to collect the flowers brought to the schools as the chief decorations.)

8. Flowers are natural tributes of sorrow, emblems of affection, testimonials of remembrance. We deck with them the cradle of our latest born: we garnish with them the sanctuaries of home—why should we not scatter them on the graves of the loved and lost?—*Col. Deming.*

9. Soldier, rest, thy warfare's o'er,
Sleep the sleep that knows no waking,
Dream of battle-fields no more,
Days of danger, nights of waking. — *Scott.*

10. As often as the 30th of May returns with time's annual round, let a grateful nation remember its dead, and with a floral offering decorate the tombs of its fallen heroes, while the dropping tear moistens the cold sod that covers their sleeping dust.

—*Gen. John A. Logan.*

11. This day may without impropriety be called our American All Saints' day, for we have no better saints than those whose memory we have come to honor.—*Rev. William McKinley.*

12. The muffled drum's sad roll has beat
These soldiers' last tattoo;
No more on life's parade shall meet
These brave and daring few.

On Fame's eternal camping ground,
Their silent tents are spread;
And glory guards with solemn round
The bivouac of the dead.

13. They throng the silence of the heart,
We see them as of yore—
The kind, the true, the brave, the sweet,
Who talk with us no more.

14. I, with uncovered head
Salute the sacred dead
Who went and who return not. — *Lowell.*

15. Yet do thy work; it shall succeed
In thine or in another's day. — *Whittier.*

16. All people in all ages, of all nationalities and religions have ever paid the highest respect and honor to the memories of those who died for their country, for liberty, and the rights of man.

17. Brave men, who rallying at your country's call,
Went forth to fight—if heaven willed to fall!
Returned, ye walk with us through summer years,
And hear a nation say, God bless you all!

Brave men, who yet a heavier burden bore,
And came not home to hearts by grief made sore!
They call you dead; but lo! ye grandly live,
Shrined in the nation's love forevermore!

—*Joseph Anderson.*

18. DECORATION ODE.....*Air--Portuguese Hymn.*
(For the Journal.)

[This ode was suggested by a visit last December to the National Cemetery near Chattanooga.]

The heroes who rest in their silent homes here,
 Shall e'er be enshrined in our memories dear.
 They volunteered all for their country's true cause,
 And fell on the field while defending her laws.

Their names are enrolled on the lists of the brave,
 Who fought for the Union, our nation to save.
 The wrongs that they vanquished, the rights they maintained,
 Shall aye through the ages be proudly proclaimed.

Their valor shall be to the youth of our land,
 Incentive for Freedom and Union to stand.
 In mem'ry of them as the years roll around,
 We'll garland with flowers each hallowed mound.

Thus honoring them, we anew consecrate
 Our lives and our fortunes to Nation and State,
 And show ourselves worthy to ever be free,
 The sons and the daughters of sweet Liberty.

—Ex-Supt. Cincinnati Schools, *John B. Peaslee.*

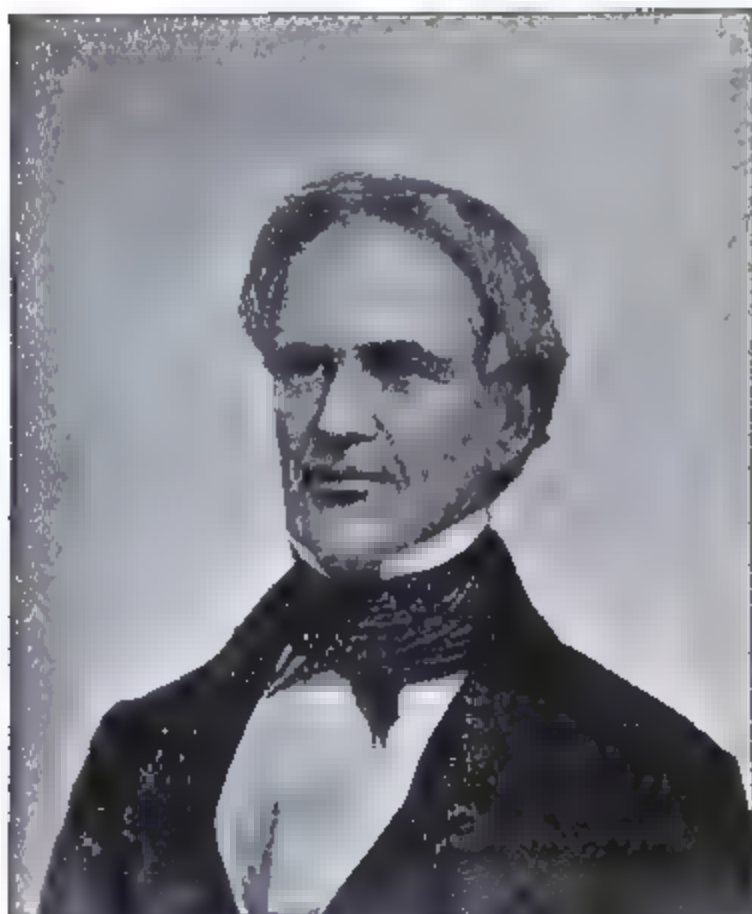
19. FLAG SALUTE.....All Standing Repeat in Concert.

To our flag, the starry banner, and to our country which it represents, we pledge our fortunes, our lives and our sacred honor.

20. SONG.....My Country 'Tis of Thee.

THOMAS HUGHES the author of "Tom Brown at Rugby" and "Tom Brown at Oxford," died a few days ago in England at the age of seventy-three. No greater tribute can be paid to his memory and no truer one than that which his own pen has left for Arnold, his old master at Rugby, a spot of old English soil, sacred to the memory of the great schoolmaster, and now as sacred to that of his distinguished pupil.

The Western School Journal says: "Subscribers who are in arrears are urgently requested to send us the amount due, with their prayers and good wishes." Prayers and good wishes are good but "they ain't fillin'"; and while "the prayer of the righteous availeth much," if any of those righteous subscribers to the Colorado School Journal, who have been praying for the paper right along without paying for it, will pause in their petitions long enough to send us a check for their full indebtedness, the new impetus given to the paper will prove to them beyond all doubt the efficacy of prayer even in these degenerate times. Try it, good friends. We do beseech you, try it!—*Colorado School Journal.*

EDITORIAL.**HORACE MANN.**

Horace Mann was born May 4, 1796, and on May 4, 1896, thousands and thousands of teachers in this country will celebrate his hundredth anniversary. This is well, for he is easily the great apostle of public school education of this continent and of the world. Is it not strange educators so often refer to Froebel, to Pestalozzi, to Rosseau, to Comenius and so seldom refer to Horace Mann, when it is true beyond the shadow of a doubt that Mr. Mann did more for the cause of public school education than did any one of the above named men; nay, more than all of them combined? Mr. Mann was the first to advocate in a clear and distinct way, what may now be called the "American System of Education," viz., the education of all children in the public schools under the supervision of the state. Public school teachers and all others interested in universal education, owe him a debt of gratitude that can only be paid by carrying forward this grand work until Mr. Mann's idea and ideal shall be realized and a good education shall be brought within the reach of every child.

Mr. Mann's dominant idea was that the only way to elevate the human race was to educate it. He believed that most sin is the result of ignorance, so he gave his life to the promotion of education.

He was never a teacher; he was first a student, then a lawyer, then a statesman, then an educator, always a benefactor. After having ac-

quired a good law practice and after having served ten years in the Massachusetts legislature, a part of that time as senator, and two years as president of the senate, with brilliant prospects for political promotion, he abandoned all to accept the position of secretary of the State Board of Education, under a new law that he had been instrumental in enacting, at a salary of only \$1500 a year. When his friends remonstrated with him and pointed to the insignificance of the position he answered: "If the title is not sufficiently honorable now, then it is clearly left for me to elevate it. I had rather be creditor than debtor to the title."

He served twelve years in this office working literally day and night for the organization and elevation of the schools. He had to *create* a sentiment in favor of the great work he was doing. In that time, he organized a state school system; he secured the establishment of the first normal school on this continent; he established the first school journal that had any permanence; he organized the first town and township teachers' meetings; he held the first teachers' institutes; he secured district libraries; he more than doubled the amount of public money spent for schools; he largely increased the length of the school term; he increased the wages of teachers nearly sixty per cent. In short, he placed Massachusetts in the fore front of all the states educationally, and what he did for Massachusetts directly, he did for all the other states indirectly. In the language of one of the leading educators of the country: "Others since his day, have been more skilled in the science of psychology or pedagogy; others have made a more careful study of methods, and have scrutinized more closely child nature; but no one has equaled him in touching the heart of the common people, and in awakening in their minds an enthusiasm in behalf of popular education." His great work was to create and arouse public sentiment in favor of universal and better education, and to secure legislation in favor of the same. His recognized ability and his high standing as a legislator enabled him to do this more effectively than would have been possible had he been only a teacher.

As an instance of Mr. Mann's spirit and all-conquering zeal, when he learned that \$1,500 more would secure the establishment of a normal school, he rushed to the office of a wealthy citizen whom he knew, Josiah Quincy, and in his striking manner said: "If you know of any man who wants the highest seat in the kingdom of heaven, it can be had for \$1,500." He got the money.

In 1848, Mr. Mann was appointed to fill the unexpired term of John Quincy Adams in Congress, and owing to his failing health due to over work, he was induced to accept it. He was twice re-elected and served nearly six years. While there he made some of the most powerful anti-slavery speeches ever heard in Congress. The atmosphere in Congress was not congenial to him and he longed to return to educational work. At the close of his last term he was *on the same day* nominated for governor of Massachusetts and elected president of Antioch College, a new institution not yet opened, located at Yellow

Springs, Ohio. Over the protest of his friends, he accepted the presidency of the college. He thought that in this new school in the new west he could best test some dearly cherished theories he held in regard to higher education. He accepted the presidency on condition that the charter of the institution should provide that the school should be Christian but not sectarian and that the only conditions of membership should be intellectual and moral fitness, without regard to sex or color.

Antioch was the first college in the world to open its doors to women and give them exactly the same educational advantages that were provided for men. It had no "Ladies' Course." Mr. Mann not only insisted on equal educational advantages for women, but he believed in women professors who should rank with men in work and *salary*. Antioch had two ladies in its first faculty who received the same pay as did their male associates.

Another of his theories was that of co-education. He believed that the association of young men and young women under proper restraints, would be mutually helpful to both. In speaking of this feature of the school, he has always referred to it as "our great experiment." He was a bitter enemy of the so-called "code of honor," so generally found in colleges. His theory was that a college stands for a definite purpose and that every one who enters it does it with the understanding that he will strive to realize that purpose. He further held that when a member deliberately violates the necessary rules of the institution and thereby defeats the ends for which it is established and maintained, he thereby puts himself outside the spirit of the college and should be cut off, unless he can be made to see his error and put himself in harmony with the established order. He further held that when a student was guilty of misconduct, his sin was not against the faculty but against the school which is for the students, and that therefore every student should be interested in the maintenance of order, that every student should feel bound to use his influence with other students to maintain order, and that when he fails in this he should go to the faculty for assistance, not only for the good of the school but for the good of the offending student himself. He further held that a student who knew of serious offenses against the school and who refused to give information to the faculty when asked became a partner in the crime, *particeps criminis*, and should be dealt with accordingly.

A person who saw another set fire to his neighbor's house or commit any other crime and would refuse to give testimony in regard to the same in court would be regarded an enemy to good society and punished accordingly. Mr. Mann argued that the college is a little community associated together for mutual interests and that a person who refuses to give testimony, needful to the successful administration of the school, thereby joins with the transgressor and becomes himself an offender. He once dismissed five members of a Junior class for refusing to give information in regard to an offense.

Another of Mr. Mann's theories was that no person who did not sus-

tain a good moral character should be allowed to graduate. He believed that knowledge is power, and that unless this power is to be directed for the improvement of mankind, the less of it a person has the better it is for the community.

He did not believe in prizes. When a Boston friend sent him a sum of money to offer as prizes for scholarship, Mr. Mann answered that he could not use it. He said that he would be glad to have money to loan to needy students but that he did not dare to offer so low a motive as *money* as a reward for faithful effort.

Mr. Mann died at Yellow Springs, Aug. 2, 1859. His last public address was his baccalaureate to the class that graduated a few weeks before his death. The last sentence of this address is characteristic and should be immortal. It was, "Go forth and do not dare to die until you have achieved some victory for humanity." His last words uttered a few moments before his death were: "*Man, God, Duty.*"

SCIENTIFIC TEMPERANCE.

To the Editor:

Ever since the General Assembly issued its mandate requiring the teaching of scientific temperance in the public school, it has been a question in my mind if practically it is the thing to do. Theoretically, it has a pleasing sound but coming down to the results, will it pay to teach this much discussed subject as a separate branch? There is, I believe, a radical error at the basis of this subject.

Let me illustrate. A teacher of this county who is an enthusiast on the subject of temperance, took some fruit into the school room and taught the children how the pure juices of the grape and apple were changed into alcohol and its effect on the body. A few days later, one of the boys of her school, a lad, eleven years of age, told one of his mates that he had learned the taste of all the alcoholic liquors in his father's store (his father was a druggist) and could readily distinguish one from another.

How much fear of the effects of alcohol do you suppose had been created in the mind of this boy by this scientific teaching? Instead of a fear, it seemed that there had been aroused in him a curiosity to know more of the things about which he had been taught. How many of these boys, think you, went home, gathered the proper fruit and in the course of a few days made their own wines and liquors in a crude way? All might not do this, but judging human nature as it appears, and especially the nature of "Young America" as I have found it in twelve years' intercourse in the school room, I think a large per cent. will "just try it once for fun" any way.

I know the thought has been and still is, that to avoid evil, we must know something about it. That is an exploded theory. Formerly we taught correct forms of speech by false syntax. But who teaches in that way now? We notice that our most eminent educators claim that children should see only the perfect form. We teach children to be

pure in thought, word and deed, but never think of specifying the evils to be avoided. No wise parent or teacher will try to deter a child from reading some unchaste book by mentioning some of its worst features.

My theory is the less said about impure things the better. Not long since I saw three boys in a book store trying to purchase a certain book which their teacher had advised them never to read, and by a few adroit questions, I learned that these boys knew absolutely nothing of this book until mentioned by their teacher and, as one of them expressed it, he had a curiosity to know what was in it any way. No doubt all who read this can recall similar instances. As the poet fittingly expresses it:—

"Vice is a monster of such frightful mien
That to be hated needs but to be seen;
But seen too oft familiar with her face,
We first endure, then pity, then embrace."

As the world is to-day, the children cannot fail to see evil in its various forms and the evil of intemperance is chief. But if they have been taught to love the good, the evil will be hated or at least not embraced, while if we continually keep it before their minds, even though we teach them to avoid it, we make it a familiar object of thought which can only produce bad results.

"As a man thinketh in his heart, so is he". "Whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report; if there be any virtue, if there be any praise, think on these things," and we may add, teach these things, preach these things, practice these things.

We all know what great imitators children are, and that with them example goes farther than precept. How, then, can we teach them the bad effects of alcohol and tobacco when fathers and brothers and men, high in position who are respected by every one, are slaves to one or the other of these habits or possibly to both? We must find some other means of teaching them the truth, so they, also, shall not be led into this captivity of the senses. Then in conclusion, my theory is teach *temperance* not intemperance, *truth* not error, *purity* not impurity, *goodness* not badness, *practical sense* not theoretical nonsense.

H. B. CHENEY,

Talbot, Ind.

TOBACCO.

The Town Council of Ridgeville has enacted an ordinance that no persons under eighteen years old shall use tobacco within the corporate limits, nor shall they be permitted on the streets after early evening hours.

Arthur McBride, of Muncie, aged seven, was unconscious for fourteen hours and came near dying as a result of excessive cigarette smoking. He was selling papers on the street when he fell unconscious to the sidewalk. Comment on the above items is unnecessary.

THE Child-Study Congress to be held in Chicago University and the Cook county normal school May 14, 15, 16 will be the most attractive meeting of the kind ever held on this continent. Nearly all the leading advocates of child-study will be present and take part in the meeting. For program and particulars, address C. C. Van Liew, Normal, Ill.

TRUSTEES ought not to allow themselves to be imposed upon. That they are goes without saying. Every year trustees spend thousands of dollars for school apparatus and appliances that they need not spend. Sometimes the apparatus, books, maps or whatever it may be are not specially needed—the same amount of money could have been spent for things that would be of more value to the schools. Sometimes the prices paid are entirely too high. If trustees would act together and buy only what has been agreed upon as necessary after consultation with the county superintendent and then buy through a committee, they could cut prices in the middle in many instances and they would always get value received.

THE REPORT OF THE COMMISSIONER OF EDUCATION for 1892-3 has reached us and is welcome. Commissioner Harris surpasses all his predecessors in office, in putting into these Reports what will be of value to any teacher who wishes to keep in touch with the progress of educational thought and educational movements. The report comprises more than two thousand pages and beside the statistical tables many subjects of importance are discussed. For example, Elementary Education in Great Britain, Education in France, Recent Developments in Teaching Geography in Central Europe, Child Study, Documents Illustrative of American Educational History, Education of the Negro, Medical Education, etc., etc. The Report of the Committee of Ten is reprinted in full. The criticisms of foreigners on what they saw at the Columbian Exposition are not only interesting but instructive. Commissioner Harris deserves great credit for this two-volume report.

THE Northern Indiana Teachers' Association held at Marion was the largest educational gathering ever held in the state. The number who enrolled and paid the annual fee was 1,075. The meetings were held in the largest audience room in the city, which has a seating capacity of about 800. This room was packed, with people standing, at every session. Before the first meeting was called to order Thursday evening, the enrollment reached over 750. The Anderson delegation, sixty-three strong, did not reach Marion till nearly 10 o'clock, Friday morning and when they arrived at the church in which the meeting was held, there was not a seat left and standing room was at a premium. Supt. Weaver and his teachers were indefatigable in their efforts to make everybody happy and they succeeded admirably. If these meetings keep on growing the state will have to be divided into four sections for meeting purposes. The first meeting of this Association was held at Rome City, in July, 1883, with J. K. Walts, president

and D. W. Thomas, chairman of the executive committee. About 75 teachers were in attendance. Indiana teachers' meetings and Indiana teachers are growing.

THE Cleveland school system has been tested and the people endorse it. The readers of the JOURNAL know something of the law governing the Cleveland, O. schools. The people elect a director. This director nominates the superintendent and the school board confirms the nomination and then the superintendent is in "during good behavior." The superintendent appoints and dismisses all teachers without consulting the School Board. The director looks after the buildings and all the material interests of the schools and the superintendent is left free to give all his time to the teaching done in the schools. His duties are purely professional. The director is elected for four years and the first term has just expired. The present director, Mr. Sargent, who is a very capable man, was re-nominated and the question in the election which has just taken place was, Shall the present system and present administration be endorsed? Of course the politicians who are willing to use school places for political purposes were opposed to it. Mr. Sargent was elected by nearly 7000 majority. The result was a strong endorsement of Supt. L. H. Jones's work. The permanency of the law is now fairly assured.

THE National Educational Association to be held in Buffalo, beginning July 7, bids fair to be an improvement upon all its predecessors. Its program is nearly completed and when done will be a superior one. Many of the leading educators of the country will have places upon it. One session will be given to the celebration of the anniversary of the birth of Horace Mann; one session will be devoted to literature, another to nature study, another to sociology. President Dougherty is leaving nothing undone that will advance the interest of the meeting. The indications now are that Indiana will send the largest delegation she has sent for many years. The usual single fare for round trip rates has been secured and low excursion rates have been arranged for to all the noted summer resorts of that region. Of course everybody will go to Niagara Falls only 20 miles away. Many will wish to go on to the seashore or the White Mountains or to Lake George or Lake Champlain; or some will prefer to take a boat just below Niagara and traverse the entire length of Lake Ontario and enter the great St. Lawrence with its Thousand Isles. Lake Chautauqua with its great attractions is not far away and possibly tickets can be secured that will allow teachers to stop over there. There is no end of attractive places to visit. Let all get ready and go.

THE Southern Indiana Association held its twentieth annual session at Washington and it was the best meeting in its history. Supt. Humke made an excellent presiding officer and kept things moving according to the program. Supt. Axtell, chairman of the executive committee, deserves much credit for the careful and extensive preparation he had made for the meeting and for the very satisfactory manner

in which he and his associates handled the unusual crowd. The meeting was the largest in the history of the Association and was one of the most enthusiastic. The teachers of southern Indiana are noted for their cordiality and sociability. There were several large and enthusiastic delegations. Evansville led the list with a special train and a delegation of 170, with Supt. Hester in charge. New Albany turned out seventy-five strong with a special car, and a printed list under the title of "Home Guards." Supt. Hershman is charged with being the author of a parody which they all sang. This is the first verse:

"We're coming" Father Artell, 'bout "three hundred thousand strong,"
In obedience to our leaders as we gladly march along,
'Tis Funk we have for captain, it is Joseph Peter Funk,
"As we go marching on."

CHORUS—"Glory, glory, hallelujah!" etc.

Vincennes with 32 teachers was marked 100 per cent in attendance, and Supt. Humke was happy. W. D. Kerlin, of Worthington, was present with his ten teachers, not one missing. Columbus reported twenty-seven out of thirty-two teachers and Supt. Carnagey brought a good excuse for the absentees. Franklin was there to a man—and to a woman, too—to capture the Association for next year and got what they went for. Supt. Feathergill led the attack. Several other places were largely represented. The actual attendance was quite a little larger than the enrollment indicates.

QUESTIONS AND ANSWERS.

STATE BOARD QUESTIONS USED IN MARCH.

GEOGRAPHY —1. It has been said that geography should be studied in its relation to the universe, to nature and to history; how does this agree with the usual method of studying it?

2. What is the true value of map-making in the study of geography? Why?

3. Why is the climate on the Pacific Coast of the United States so much warmer than that of the parallel latitude on the Atlantic Coast?

4. What relation does geology bear to geography?

5. A workman opening a ditch for sewers finds many rounded and oval stones with long, straight marks upon them. In what part of the state did he probably work? What do these stones indicate?

6. In our hemisphere does the sun shine for a longer period of the year south of the equator or north of it? How much longer?

7. "The main purpose in teaching geography should be *humanity* and not *locality*."

Discuss the above statement. (Answer any six, not omitting 7.)

HENRY VIII.—1. Describe Wolsey's last days as given by Griffith in his conversation with Catherine in Act IV.

2. What does Griffith mean by this utterance in regard to Wolsey:
"His overthrow heaped happiness upon him;
For then, and not till then, he found himself,
And found the blessedness of being little."

3. What is Catherine's estimate of Wolsey?
4. Describe Catherine's behavior when visited by Capucius at Henry's request.
5. Give your estimate of Catherine's character.
6. How came Cranmer to be Archbishop?
7. What is the main topic in Act V?
8. What do you consider the significance of Cranmer's prophecy at the end of the drama touching the infant Elizabeth?

SCIENCE OF EDUCATION.—Why is a lesson on granite more interesting naturally than a lesson in spelling?

2. State the distinction between *direct* and *indirect* interest. Give an illustration of each?
3. Which of these has the greater value in education and why?
4. What things in subject matter are fitted to excite the child's interest?
5. Define empirical interest; speculative interest; esthetic interest.
6. The interests of humanity, says Herbart, are *sympathetic*, *social* and *religious*. Explain these terms.
7. What is the relation of interest to all activity? (Any six.)

HISTORY.—1. Are goods produced cheaper under a free than under a slave labor system? Use figures in illustration if you can.

2. What differences of policy existed between President Johnson and Congress? Toward which of these policies did President Lincoln incline, judging from the utterances that might foreshadow his future policy?
3. What has occasioned immigration to America?
4. What were the causes and effects of the Emancipation Proclamation?
5. What distinctive policy marked the administration of Hayes? Was the policy effective?
6. (a) "Search out the essential idea in the political government, family, school, church, business, and society." (b) "Study the lives of a few eminent men in the light of the institutions they stand for." Show how the above statement may enter into the basis of history work. (Any four, not omitting 6.)

READING.—1. What should a child of average ability under a faithful and efficient instructor accomplish in reading during his first year's attendance at a well graded school?

2. What would you hope to have the same child accomplish during its second year under similarly favorable circumstances?
3. Name the titles of two books that you would recommend as supplementary reading matter for first year grades; two others that you deem suitable for second grades?
4. What would you suggest as appropriate matter for the teachers of these respective grades to read occasionally to their pupils? What is the pedagogical purpose of such reading?
5. If you would drill the pupils of either of these grades in phonics,

state how early you would begin such drill and state your reasons for so doing.

6. (a) What is the scope of the work for the first *third* of the first school year in reading as given in the State Manual? (b) Name as many as *five* of the points to be considered in the presentation of reading lessons as given in the State Course of Study, *second year*.

SCIENTIFIC TEMPERANCE.—1. What is alcohol chemically? Pharmaceutically, to what class does it belong?

2. What scientific use is made of alcohol? Can you deduce from this any guiding principle as to its internal use by man? What?

3. Alcohol does not relieve thirst? Why?

4. Is alcohol heat-creating? Give reasons for your answer.

5. What effect upon the gastric mucous membrane does the use of alcohol have? What conclusion can you draw from this?

6. Are there any conditions in which the use of alcohol may be advantageous? If so, name some.

7. Which are the most fatal effects of alcohol upon men, physical, mental or moral? Why? (*Any five.*)

PHYSIOLOGY.—1. Describe the red blood corpuscles and state their functions.

2. What is the relation between the blood and the lymph? Draw a diagram showing the lymphatic circulation.

3. Describe the pancreas, name its secretion and describe the function of the latter.

5. What causes the feeling of hunger when the stomach has been empty for some time?

5. Describe the manner in which man moves from place to place.

6. Into what groups can you classify glands using their outlet as a distinguishing mark?

7. In what part of the spine do sensory nerves originate?

8. To what class of animals does man belong and how does he differ from the other members of the class? (*Any five.*)

GRAMMAR.—1. Compare and contrast the adjective and attributive verb.

Analyze: The wiser he grew the humbler he became.

3. What is voice? What grounds for saying all verbs have voice? For saying only transitive verbs have voice?

4. Tell what part of speech and explain the use of italicized words in the following sentences:

(1) Wheat is worth sixty *cents* a bushel.

(2) He was called a *patriot*.

(3) The apple tastes *delicious*.

(4) He came *walking* to me.

(5) I am desirous of *learning*.

5. Define gender. What grounds are there for saying there are four genders? For saying there are three?

6. It fell into the bucket." State three things you know about the object represented by *it*. Use the quoted sentence in a story to show what is represented by it. (*Any five.*)

ARITHMETIC.—1. (a) 20% of the selling price is gain; what is the rate of gain? (By analysis.)

(b) Make a concrete problem corresponding to the above statement.

2 The regular railroad fare is 3c. per mile; a mileage book costs 2c. per mile. In traveling 1,000 miles, what is the the gain per cent. to the purchaser and the loss per cent. to the railroad?

3. What is the effect upon the value of a fraction (*a*) of dividing the denominator by an integer; (*b*) of multiplying both terms by the same number? Explain as to a class of fifth year pupils.

4. Give such questions in concrete problems as you would put to pupils to test their knowledge of the number 7.

5. Make a concrete problem illustrating the principle of the Least Common Multiple of three numbers.

6. What would be the proceeds (use True Discount) of a \$200 note, due 1 year after date, bearing 8% interest, discounted at 6% at the end of six months.

7. Find the cost of building a tight board fence 6 ft. high, 84 feet long, boards 1 inch thick, at 3 cents a foot, board measure.

8. A man owned a quarter section of land. He sold a strip 20 rods wide off the east side. What is the value of the remainder of his farm at \$50 an acre?

ANSWERS TO PRECEDING QUESTIONS.

HENRY VIII.—1. See March number of the JOURNAL, page 190.

2. He means that Wolsey's overthrow taught him the true worth of life. Before, he had supposed life to be self-exaltation; now he knows it should be humility. A slight modification of some poet's lines expresses the meaning well:—

He slept and dreamed that life's ambition,
He woke and found that life's contrition.

3.

He was a man
Of an unbounded stomach, ever ranking
Himself with princes; one that by suggestion
Tithed all the kingdom: simony was fair-play;
His own opinion was his law: i' the presence
He would say untruths; and be ever double
Both in his words and meaning: he was never,
But where he meant to ruin, pitiful:
His promises were, as he then was, mighty;
But his performance, as he now is, nothing:
Of his own body he was ill, and gave
The Clergy ill example.

4. She is humble and forgiving, forgetful of herself and anxious only about the welfare of her daughter and the king.

5. In brief, Catherine is gentle, forgiving, self-sacrificing, patient and loving. She is very religious and sympathetic. The daughter of a king and the wife of a king, her disposition was of necessity aristocratic. It is likely I think that the loss of her children made her so

despondent that she was not altogether agreeable in her domestic relations.

6. Henry made him archbishop that Cranmer might conduct the divorce proceedings to Henry's likings.

7. The Princess Elizabeth.

8. Its chief significance for the play lies in its exhibition of the contrast between England under Elizabeth and England under previous rulers. Of course the strangeness of the truth of the prophecy disappears when we know that it was written after the events it foretells had occurred.

GEOGRAPHY.—1. Not at all, because of incompetency. In many schools it is studied simply as an aggregation of isolated facts unrelated to each other or to anything else.

2. The true value of map-making is its power to impress upon the mind the relative size and locality of the different features represented.

3. The warm Japan current makes the circuit of the northern Pacific and part of it strikes our continent on the coast of Alaska, and then follows it southwesterly, thereby softening the temperature as far as the Gulf of California. On the Atlantic coast the tendency of the Gulf Stream is to veer away from the coast and the cold Labrador current comes down between the Gulf Stream and the coast affecting the temperature as far south as the Delaware bay.

4. In studying geology, we discover the causes of the present condition and extent of the geographical features and resources of mother earth. Geology is a story of the earth. By a careful study of the rocks, their nature, position, appearance, and composition, we can tell how they were made, and how the mountains and continents were formed. Physical geography is the sequel of the story, and describes the various phenomena exhibited by the earth as an organization; and investigates their relations, causes, and consequences.

5. In all except a strip along the southern part embodying the highlands. The marks or scratches on rocks indicate that glacial ice containing harder rocks or gravel has moved over them.

6. Because the sun is not in the centre of the earth's orbit and because the earth does not move at the same rate in all parts of its orbit, the vertical rays fall north of the equator 185 days and south of the equator 180 days.

7. The greatest feature of the earth's surface is the life that dwells upon it, and of which the highest creature is man. The end in view of all study is that of creating a fulness of interest in life and in the life of every human being. Geography is a part of one's every day life—a living reality. It is a study of the earth—the theater of all human thought and action. Locality is but one of the minor elements constituting the great subject of geography.

ARITHMETIC.—1. Let the cost price be 100%. If 20%, or $\frac{1}{5}$, of the selling price is gain, the cost price is $\frac{4}{5}$ of the selling price; that is, 100% is $\frac{4}{5}$ of the selling price; hence $\frac{1}{5}$ of the selling price = $\frac{1}{4}$ of 100% = 25%, the rate of gain. I sell a book for 50 cents, thereby gaining 10 cents; what is my rate of gain?

2. The purchaser saves \$10, or $\frac{1}{3}$ of the price of the regular fare. The railroad loses \$10, or $\frac{1}{3}$ of the price of the regular fare. The usual application of gain per cent. and loss per cent. is not consistent here. To be clear we must say that the purchaser saved $33\frac{1}{3}\%$ of the regular fare, and the railroad lost $33\frac{1}{3}\%$ of the regular fare.

3. (a) Dividing the denominator by a number has the same effect as multiplying the numerator by the same number. The result is as many times the value of the fraction as there are units in the number.

(b) The value of the fraction is not changed. Let the class have in mind, for example, the fraction, $\frac{3}{8}$. Ask what the result would be if the denominator were divided by 2. Ask about the comparative size of the pieces—fourths and eighths. Question closely in regard to the comparative values of $\frac{3}{4}$ and $\frac{3}{8}$. Next, let the numerator be multiplied by 2. Question closely in regard to the comparative values of $\frac{6}{8}$ and $\frac{3}{8}$. Lastly, compare the two results $\frac{6}{8}$ and $\frac{3}{4}$, and work out the idea that when a certain fraction is given us as a basis, we reach the same result by doubling the size of the parts, or by doubling the number of parts of the given fraction; and so on.

Bring me seven pencils; count seven pupils; here are four pencils—how many more to make seven? How many twos in seven (use objects)? etc.

5. Four bells toll at intervals of 32, 35, 45 and 60 seconds respectively; if they all commence together, after what interval will they again toll together?

6. The amount due at the end of the year is \$216. The problem now is—what principal, at 6%, for 6 mo., will amount to \$216?

$216 \div 1.03 = 209.708+$; hence, \$209.708+ is the proceeds.

7. $84 \times 6 = 504$, the number of board feet; at 3 cts. a foot, this amount of lumber will cost \$15.12.

8. There are 160 acres in a quarter-section; a strip 20 rods wide contains 20 acres. After selling this there remain 140 acres. At \$50 an acre, this would bring \$7000.

SCIENCE OF EDUCATION.—1. Because of the powerful attraction that concrete objects have for the attention. There is an appeal to the eye, by something real, one of nature's products. Curiosity and perception both come into play to heighten the degree of interest.

2. *Direct interest* is that felt for the thing itself, because of its innate attractiveness; in the knowledge acquired it finds only incentives to further acquisition; as, a direct interest in the study of history leads one to a desire for further knowledge of history.

Indirect interest is that which points to something else as its source; as, the interest in a health resort because it may restore one's health; or, the interest a pupil may feel in a lesson, because excellence in it may win him a prize. (See McMurry, pages 66 and 68.)

3. Direct interest has the greater value in education, for it leads to the cultivation of desires that are pure, generous and elevating, the desire for more knowledge, the desire to imitate what is admirable and to shun what is ignoble; while indirect interest leads to desires that are selfish and egotistic, often producing jealousy and unkindness.

4. The things in subject matter that are fitted to excite the child's interest are (a) concreteness; (b) variety; (c) novelty; (d) structure; (e) beauty; (f) utility; etc.

5. (a) *Empirical interest* is that aroused by the variety and novelty of things seen. (b) *Speculative interest* is that which inquires into the relations and causal connections of phenomena. (c) *Esthetic interest* is that which is awakened by what is beautiful, grand and harmonious in nature and art.

6. The interest that is *sympathetic* is that felt for others in joy or sorrow and is based upon our interest in them individually. *Social interest* is the regard for the good or evil fortune of societies and nations. *Religious interest* is the regard we feel for God, His laws and the future life.

7. Interest induces a favorable mental state as a basis for will action. A many-sided harmonious interest creates worthy desires that promote will-energy.

U. S. HISTORY.—1. Goods can be produced cheaper under a free than under a slave-labor system. The slave is improvident, unskillful, must be fed, is wasteful of time and material. The price of cotton now is less than it was under the old slave system of cultivation. In the year 1850, the products per acre in the free states were worth \$7.94; in the slave states, \$3.49. In the north the average annual production of each agriculturist was \$342; in the south, it was \$181. Under the slave system, the average annual production of each adult slave was only about one-half that of each adult freeman. This condition tended to increase the cost of production in the slave states.

2. The chief difference in policy between Congress and President Johnson was in regard to the re-construction of the seceded states. The President, as a state's-rights democrat, held that the southern states had never been out of the Union; that the leaders alone were responsible; that as soon as the seceded states applied for re-admission under such a form of government as complied with the requirements of the constitution, the Federal Government had no power to refuse their admission, or to make any conditions upon subjects over which the constitution had not expressly given Congress jurisdiction.

The republican leaders held that the action of the seceded states had deprived them of their rights as members of the Union; that in any event they were conquered, and as such, at the mercy of the conqueror and that at best they stood in the category of territories seeking admission to the Union, in which case Congress could admit or reject them at will. President Lincoln inclined more to Johnson's policy, than to that of the ultra-republican leaders.

3. Religious and military persecution, scarcity of land, low wages, and high taxes in the old world, give rise to discontent, which is much intensified at the reports of civil freedom, cheap land, high wages, and low taxes of our own country, and under the combined influence of these causes, many persons come to our shores.

4. Lincoln issued the Emancipation Proclamation as a war meas-

ure to weaken the enemy. He also wished to announce to the people of the North and of the world that the war which began as a war for the Union, was to be henceforth a war against human slavery as well as a war for the Union. The immediate practical effect of the proclamation was to set free the slaves within the Federal lines; it did not abolish slavery, that was done by the thirteenth amendment. The general effect of the proclamation was to place the North and the South before the world as fighting respectively against and for human slavery. A later effect has been, marked progress on the part of the South.

5. The conciliating policy of President Hayes toward the South was by some, flippantly called his "Sunday School policy;" and was a subject that created much discussion at the time. Perhaps the most distinctive policy of Hayes' administration was the beginning of "Civil Service Reform." This policy was very effective, pleased the people, and has continued to grow in favor.

6. The government, the family, the church, the school, society and business embody all the institutional ideas of cultivation. Each one forms a central progressive line of thought and action around which cluster and to which converge various minor details that contribute to its life and growth. In studying the rise and progress of these institutions in connection with the lives of the men who laid their foundations and built their superstructure, we gather in all of history that is real or useful.

PHYSIOLOGY.—1. (See Adv. Phys., pages 82 and 83.) The red corpuscles absorb oxygen and convey it to the tissues.

2. After all the various tissues have selected their respective needs from the blood, there remains a portion that is taken up by the lymphatics, so that it is again run through the circulation. The semi-fluid material resulting from the worn-out cells is also taken up by the lymphatics. Lymph is therefore refuse blood and worn-out tissue.

3. (See pages 145 and 151.) The pancreatic juice (*a*) changes the cane sugar into glucose; (*b*) completes the change of the starchy matters into glucose (this is begun by the saliva; and the pancreatic juice in its function is slightly aided by the intestinal juice); (*c*) changes the fats into an emulsion (in this it is aided by the bile).

4. Hunger is caused by a want in the system generally; and, locally, by a condition of the gastric mucous membrane. (See text-book page 119.)

5. In moving from place to place, the body never entirely quits the ground, the heel of the advanced foot reaching it before the toe of the rear foot has been raised from it. In each step the advanced leg supports the body, and the foot behind at the beginning of the step propels it.

6. Using their outlets as a distinguishing mark, glands may be divided as follows:—(*a*) Those whose outlets open outwardly; as, the lachrymal, Meibomian, sudcriferous, and sebaceous. (*b*) Those whose outlets open inwardly; as, the salivary, the gastric, the liver, the

pancreas, and the intestinal glands. (c) Those whose outlets are within the tissues, as, the lymphatic glands. (d) Those that have no outlets; as, the spleen, the thymus, the thyroid and the supra-renal bodies.

7. They originate in the posterior columns of the spinal cord.

8. Man belongs to the class *mammalia* of the general division, *vertebrates*.

GRAMMAR.—They both express attributes. The attributive verb asserts the attribute of its subject; the adjective expresses an attribute without asserting it.

2. This is a complex declarative sentence; "the humbler he became" is the principal proposition; "humbler" is a predicate adjective after "became," and is modified by "the" a simple adverb of degree. "The wiser he grew" is the subordinate proposition; "wiser" is a predicate adjective after "grew;" "The" is a conjunctive adverb modifying "wiser," and joining its proposition to the simple adverb "the."

3. "Voice is that property of the verb which shows whether the subject represents the doer or the receiver of the act." The only grounds that would let voice apply to all verbs would be that all verbs have subjects. To make voice apply only to transitive verbs, the act must be considered as terminating on an object.

4. "Centa" —a noun—an adverbial objective modifier of "worth;" "patriot" is a noun, a predicate nominative; "delicious" is a predicate adjective; "walking" is a present participle and used as a predicate adjective; "learning" is a present active participle, used as a noun, and is object of the proposition "of."

5. By considering "gender" a property that belongs to all nouns, we have four genders. By taking *neuter gender* at its real meaning we would have but three genders. By considering *gender* synonymous with *sex*, we have but two genders.

6. (a) It is heavier than air; (b) it is above the bucket; (c) it is small enough to be contained in the bucket.

A little mouse in search of food climbed up to the edge of a bucket; but losing its balance, it fell into the bucket.

SCIENTIFIC TEMPERANCE.—1. Alcohol chemically is a hydro-carbon, $C_2 H_6 O$; pharmaceutically, it is a solvent and a preservative.

2. In science, it is used as a solvent and as a preservative. The latter use has been brought about by virtue of its water-extracting power. Its effects on the tissues, drying and hardening them, and destroying their vitality, are certainly sufficient reasons for not taking it into the stomach.

3. Thirst is relieved by taking water into the system. Alcohol gives the system no water but eagerly extracts water from whatever it comes in contact with.

4. Alcohol is not heat-creating. After taking a moderate quantity, there is a slight rise in temperature caused by a quickened circulation. But in a little while the temperature falls below that which it was before taking the alcohol.

5. It interferes with the natural operations of water within the organism, by taking it from the tissues; and it coagulates the albumen of the blood. The normal action of the membrane is thereby impeded.

6. Some physicians claim that it should be used to stimulate the system, in a low stage, until it has passed a critical point; they aver that life is thus preserved until the system itself can come to the rescue and rally its own vitality. But this is very questionable. Real stimulation can come only from nutritious food, and when the system is in a low stage far better results are obtained from the use of properly prepared liquid foods, than from any kind of alcoholic beverage.

7. Its effects on their morals. They become reckless in thought and action and seem to lose respect for self. Reason loses control and the moral sense is blunted. This condition is soon followed by loss of power, physical and mental.

READING.—1. The regular first reader that is in use in school, together with at least two supplementary readers (of the same grade of difficulty), or their equivalent; as, the Riverside Primer and Reader; or Stickney's First Reader and Cyr's Primer.

2. The regular second reader that is in use in the school, together with at least two supplementary readers (of the same grade of difficulty); for example, Cyr's Second Reader and Fairy Stories and Fables.

3. See answers to 1 and 2.

4. Eclectic School Readings, Stories for Children, Eggleston's Stories of Great Americans, and Stories of American Life and Adventure. The pedagogical reason is that there may be created in the child's mind a lively permanent interest in good literature and in the lives and characters of great and good men.

5. As early as the beginning of the second year, in order that their organs of speech may become early accustomed to giving the sounds correctly. During the first year the organs are sufficiently exercised in adjusting themselves somewhat to the work before them.

6. See State Manual.

FOOD FOR THOUGHT.

[Send all communications to W. F. L. Sanders, Connersville, Ind. They should be received by May 18. Be prompt. Write only on one side of your paper.]

SOLUTIONS RECEIVED.

121. What is the area of a field whose sides in successive order are 16, 20, 30, and 24 rods, and whose diagonals are equal.

[JOHN MORROW, Charlestown, Ind.]

(We received one solution to this that did not take into consideration the equality of the diagonals; in the solution two of the sides were arbitrarily taken at right angles. Of course the work was not what is required. All ye lovers of mathematics, take hold of the problem and send us a good solution.)

122. AB is a chord of a circle. At B draw a tangent and at A a radius, and a perpendicular to the tangent. Show that AB bisects the angle at A. [J. C. GREGG, Brazil, Ind.]

Solution by Claude Riddle, Purdue University

Draw the figure according to the conditions of the problem, and let O be the center and C the foot of the perpendicular. Draw OB. Angle $OAB = OBA$, and $OBA = BAC$ (alternate interior angles); hence, $OAB = BAC$, which was to be proved.

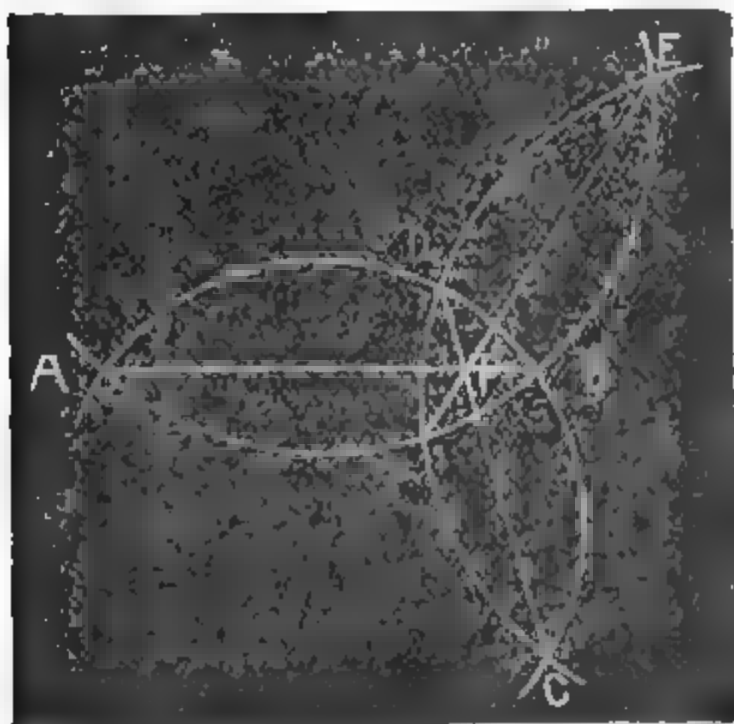
123. (Otto Clayton, Fowler, Ind., has sent us a solution to this, involving the integral calculus. His result is 7.3 inches [nearly] as the diameter of the hole required to bore out half the contents.)

124. A person has \$5000 stock in the 3 per cents. which he sells and re-invests in the $3\frac{1}{2}$ per cents., at $87\frac{1}{2}$ (brokerage $\frac{1}{8}$ in each case) and increases his income by \$5; find the price of the 3 per cents.

Solution by J. H. Shock, Danville, Ind.

3% of \$5000 = \$150, income on first set of bonds; $\$150 + 5 = \155 , income on second set of bonds; $3\frac{1}{2}\% = \frac{7}{20}$; $\frac{7}{20} = \frac{155}{x}$; $x = \$4500$; $\frac{155}{4500} = \frac{190}{x}$; $x = \$4500$, par value of second set; these were purchased at $87\frac{1}{2} + \frac{1}{8}$ or $87\frac{1}{2}$, and hence cost $\$4500 \times .87\frac{1}{2} = \3875 ; this, also, is the sum realized by the sale of the first set; $3875 + 5000 = .77\frac{1}{2}$, price per dollar of the 3 per cent., not including brokerage; $.77\frac{1}{2} + \frac{1}{8} = .77\frac{1}{2}$, total price of the 3 per cents. Answer $77\frac{1}{2}$.

117. If three circles intersect each other, their common chords are concurrent lines. (E. M. VAN BUSKIRK, Monroeville.)



have $PE \cdot PF = PE \cdot PF'$, therefore $PF = PF'$, and F and F' coincide at the intersection of the arcs, and EPF is a common chord, and the thing is proved.

[J. C. GREGG, BRAZIL.]

Joshua Hayes, Springport, sends in an excellent solution to the above. He joins the centers with each other, the joining lines being perpendicular to the chords. He then uses the theorem that "If at any point in a straight line a perpendicular be erected, the difference of the squares of the distances of any point in this perpendicular from the two extremities of the given line is constant."

SOLUTION.—If the three centers are in line, the common chords are parallel and the position is not true. But, otherwise, let the chords AB and CD meet in P, and we have $AP \times PB = PD \times PC$(1)

Now join EP and produce it to cut the arc ABE in F, and, if possible, cut the arc EDC in a different point, F', say. Then we have $AP \times PB = PE \times PF$(2); and $PD \times PC = PE \times PF'$(3). Comparing (1), (2) and (3), we

SOLUTIONS REQUESTED.

(From Wentworth's Geometry, Page 175.)

235. If two circles touch each other, their common tangent is a mean proportional between their diameters.

The "Hint" says, "Let AB be the common tangent. Draw the diameters AC, BD. Join the point of contact P to A, B, C, and D." Let M be the middle of AC and N be the middle of BD, and join M and N; MN passes through P. (§250.) $\angle AMP + \angle BNP = 2$ right angles (§109); $\angle PAB = \frac{1}{2} \angle PMA$ and $\angle PBA = \frac{1}{2} \angle PNB$ (§262, §269); hence $\angle PAB + \angle PBA =$ a right angle; then $\angle APB$ is a right angle and as $\angle APC$ is a right angle, the line CPB is a straight line. As $\angle C = \angle DAB$, the triangles CAB and DAB are similar and we have the proportion $AC : AB :: AB : BD$ which was to be proved.

CREDITS FOR SOLUTIONS.—122, Joshua Hayes, Springport; Claude Riddle, Purdue University; A. J. Collins, Orland; J. Stommel, Hanover Center.....124, Clarence Myers, Abington; Walter Vanscoyoc, Crawfordville; W. F. Headley, Bloomington; J. H. Shock, Danville; Irvin S. Morse, Crumston.....106, 122, William Hadley, Hadley.....122, 123, Otto Clayton, Fowler.

ANSWERS TO QUERIES.

13. After William Penn had obtained a grant of Pennsylvania he was desirous of owning a strip of land on the west bank of the Delaware to the sea. So he induced the Duke of York to surrender all his title to New Castle and twelve miles around it, and to the land between this tract and the sea. The curved line that is seen represented on the map was then run, twelve miles from New Castle. Then beginning at the west end of the arc a straight line was run nearly due north, giving Penn the strip he specially desired. When the "three lower counties on the Delaware" became a state they retained this boundary.

14. Ho. means House. For example Cumberland Ho. means Cumberland House, a station of the Hudson Bay Co. At first they were stopping places along certain routes, and thereby had applied to them certain distinctive names. Some of those that grew into towns dropped the latter part of the name.

16. Briefly, Venezuela alleges that some of her territory is being encroached upon by Great Britain. The latter places the boundary line between British Guiana and Venezuela much farther westward than Venezuela thinks it ought to go. If this is true, the United States is affected to the extent in which the Monroe doctrine is disregarded.

17. New Hampshire became a royal province in 1680. J. H. Shock, (Danville) says July 24, 1679.

18. If it is Sunday on the east side of the "International Date Line" it is Monday on the west side of it. (This difference is true at all times except the exact instant at which this line coincides with the midnight of the heavens, at which instant it is the same date all round the globe.)

21. Considerate treatment and the force of circumstances brought these two truant states to a vote of ratification. "Their helpless plight outside of the Union had become so manifest that Congress at its first session consented to relieve the vessels of these states for a limited period from the burden of a foreign tonnage duty." North Carolina at once saw that in the Union was better than out of it and ratified Nov. 21, 1789; but Rhode Island was stubborn and in the United States Senate a bill was promptly passed which prohibited all commercial intercourse with Rhode Island and required her to pay her quota of the continental debt. This movement, together with threatened secession within her own borders, changed enough votes so that ratification was carried by a majority of two. (See Schoulers's History of the United States, Vol. 1, pages 127 and 128.) J. H. Shock, Danville, says: "These states would have been free to establish any kind of government desired by them. No lawful action could have been taken by the General Government, other than an attempt to secure their voluntary ratification of the Constitution. (See Art. VII, Constitution.)"

37. The amendment was to place the judiciary of the United States on the same foundation that the British judiciary are placed by their laws, by enabling the President, on the joint address of the Senate and House of Representatives of the United States, to remove a judge. It was proposed by Robert Wright, of Maryland, and the House voted it down, 45 to 38.

19. It is impossible to find the exact dimensions of a square acre, but the error may be reduced to a very small amount. (J. H. Shock, Danville.)

11. *American*.—E. C. Stedman, T. B. Aldrich, William Winter, Bret Harte, James Whitcomb Riley, R. W. Gilder, Lucy Larcom, Ella Wheeler Wilcox, etc.

English.—Charles Algernon Swinburne, William Morris, William Watson, Alfred Austen, etc.

40. Who proposed the eleventh amendment to the Constitution of the United States, and what is the purpose of the amendment? (—— Bremen, Ind.)

"This amendment was proposed and carried by the advocates of state sovereignty. A suit was brought in a United States Court against the state of Georgia. The states were surprised and disgusted when it transpired that an individual could sue them. They had regarded themselves as sovereign and free from all such indignities. When they found that they could be sued they adopted this amendment. Since its adoption (1798) it has been possible for a state to repudiate its just debts because suit cannot be brought to recover them."

CREDITS TO QUERIES.—17, 18, Philip Abell, Velpen.....17, 18, 19, 21. J. H. Shock, Danville.

PROBLEMS.

125. Two circles intersect in A and B. Any line, PAQ is drawn through A, cutting the two circumferences in P and Q. Through P and Q diameters are drawn intersecting in X. Show that the angle X is constant and find its locus. (J. C. GREGG, A. M., Brazil, Ind.)

126. The loss on broadcloth was \$40 and the loss on silk was $7\frac{1}{2}\%$. The loss per cent. on the silk was 75% of the per cent. of loss on broadcloth. For what were the goods sold if the loss on silk was 10% of the loss on broadcloth. (W. A. MILLER, Atlanta, Ind.)

127. How much 3 per cent stock has been sold at 89 if the owner's income is increased by \$12 a year by investing the proceeds in 4% stock at 92? (Ed.)

128. The area of a right-angled triangle and the sides of a rectangle inscribed therein, being given to construct the triangle geometrically.

129. Given $\begin{cases} (x+y)^2 + (x+y) = 30 \\ x-y = 1 \end{cases}$ to find the values of x and y . Ed.

MISCELLANY.

NORTHERN INDIANA TEACHERS' ASSOCIATION.

MINUTES OF THE FOURTEENTH ANNUAL MEETING HELD AT MARION,
APRIL 2, 3, and 4, 1896.

The Northern Indiana Teachers' Association convened in Marion, April 2. The day was devoted to visiting the schools of the city which were found to be in excellent condition. The meeting proper was called to order by the retiring president, H. G. Woody, of Kokomo, at 7:30 p. m., in the First M. E. Church,

Miss Maud Dula rendered a piano solo, after which Rev. John M. Driver invoked the divine blessing. Music by Miss Louise Mather was followed by a delightful address of welcome by Mr. William Sanders. Fun and good humor, hospitality and kindness fairly sparkled through the whole talk and made his hearers feel that they were among friends. In speaking of the triumphs of mind over matter, he said:

"Natural gas was here centuries ago when this spot was covered with forest and trod by the savage, and afterward when Marion was a drowsy village, but it slept in the rock apparently powerless. It was not until it was touched with the magic of mind that it awoke, and it was not until then that it became useful. It was true that there were the drill and the derrick, and there were other appliances to release and restrain and again to release this power, but back of all this was mind, just as there was mind back of all the appliances and all the achievements of all the ages. The glory of civilization was the degree to which man had attacked his environment. Back of all this was mind—mind which transformed the cave into the cottage and the wigwam into the palace, the swamp and wilderness into the garden, the field, the village, the town, the city; mind which transformed man the animal into man the masterpiece and the darkness of savagery into the blazing light of civilization. It is mind which makes the achievement of today beyond the dream of yesterday.

"Yesterday we wanted a better light and were handed the pencil and the filament of carbon; to-day we are producing the light without either; to-morrow we shall be carrying sunbeams about in our pockets as well as in our hearts. Yesterday we wanted the north pole, to-day it is ours and above it floats the flag of civilization. Yesterday we were reproducing only surface indications in photography; to-day we are photographing the human brain; to-morrow we shall be reading

the human soul, and again we shall say the achievements of to-day are beyond the dream of yesterday.

"And back of all this is mind. This means the progress of the age and I like to think of this on this occasion, for there is no vocation which more clearly bears the stamp of this marvelous progress than that of the teacher.

"The teachers come here not so much to receive new ideas or to acquire additional facts, as for the quickening of the intellect which comes from discussion—as it comes from nothing else. They couldn't come here to sharpen their own wits without doing more or less to sharpen ours. Of all these manifestations of inscrutable power, there is none more subtle and yet none more real, none more delicate and yet none more potent, none more mysterious and yet none more perceptible than the indefinable influence of presence upon presence, the incomprehensive sway of mind over mind, the electric touch of soul with soul, the 'spiritual electricity' which brings one human being into communion with another."

W. P. Burris, of Bluffton, responded, thanking the people of Marion for their hospitality thus extended. Music by Miss Annie Landis Brownlee.

Mr. H. G. Woody, made a few remarks introducing the president-elect, Calvin Moon, South Bend, whose subject was "The End or Purpose of Education." He spoke, in part, as follows:

"The pupils of Fagin, the Jew, in 'Oliver Twist,' had no particular love for pocket-picking, nor skill in the art until their master stimulated the one and taught the other. The infatuation they acquired for the wicked pastime, and the pleasure they had in their own cunning, was simply the joy of self-activity wrongly directed. The final cause of their development was not found in them, but in the wicked mind of the mercenary old wretch who had them in his power, and, obeying the negative side of their natures, developed them in the line of his purpose."

Unfortunately, he said, it was not necessary to go to fiction to find illustrations of the fact that the mind of childhood is capable of development in either direction. Sad examples were all around. It was not necessary to cite them to impress upon this body of teachers the fact that the most essential principle of the educational process is the purpose of the process. If this purpose were found already realized in the mind of the child, then would the process be unnecessary—its results being already accomplished.

Neither physiological psychology, nor the study of child nature, as usually conducted, was capable of supplying the most essential principle of the educational process. These studies were useful. They assisted the intelligent teacher in the adaptation of means to the accomplishment of the end, but the end must be sought elsewhere and by other means. It resided not in nerve tissue, but in spirit; it was found not in the undeveloped mind of childhood, where it has no existence except a potential one. It was to be found in the products of the most mature minds.

He emphasized the importance of forming the pupil's character in accordance with the principles of punctuality, regularity, silence, industry, truthfulness, kindness and justice. The study of child nature did not reveal the principles in the mind. The teacher must bring his pupil into harmony with them, form his character by them so that it should become his habit, his pleasure, in all the relations of life, to be prompt, regular, silent, industrious, kind, truthful and just.

Music by a quartette of ladies was heartily enjoyed.

FRIDAY MORNING.—A half hour before the time set for the opening,

of the morning session found the room well filled with enthusiastic teachers. Supt. F. M. Beard, of Hartford City, led the devotional exercises. President Moon then introduced A. W. Edson, Agent of the State Board of Education, Massachusetts.

He spoke upon the "Characteristics and Qualifications of a Good Teacher." He insisted that a teacher may rank high in scholarship and yet fail without a good supply of tact. Smooth the hard places by a judicious use of common sense. Go around an obstacle that is clearly insurmountable.

W. A. Millis and W. A. Bell took part in the discussion.

After a short recess, Mr. Edson spoke on "The Recitation." He said: "This does not end with presentation of facts, but should rather aim to direct correctly the child's activity, stimulating it to the highest and fullest exertion. Let a recitation include a thorough drill on subject matter taught; a drill in rapidity and accuracy; a test as to the clearness of conceptions. Let it also include a review of the whole that the lesson may be impressed upon the pupil in its entirety, and he may realize that it belongs to him and it is a part of him. Teach pupils to think systematically, energetically and exhaustively." Mr. Edson's addresses were well received and highly appreciated by the teachers.

D. M. Geeting, state superintendent, and J. C. Dickerson, of Goodland took part in the discussion.

The following committees were announced:—On Nominations: D. M. Geeting, Indianapolis; W. J. Stabler, Richmond; F. M. Beard, Hartford City; W. A. Millis, Attica; J. L. Glasscock, Lafayette; F. M. Ingler, Marion; G. M. Naber, Columbia City; B. J. Bogue, Mishawaka.

Executive Committee: W. C. Bellman, Hammond; W. A. Bell, Indianapolis; A. D. Moffitt, Decatur; J. H. Grover, Franklin; Edward Royle, Michigan City; W. R. J. Stratford, Peru; E. G. Machan, La Grange; Wm. H. Sims, Goshen; George S. Wilson, Greenfield.

On Resolutions: J. J. Allison, Crown Point; J. M. Sullins, Lafayette; James F. Scull, Rochester; Miss India March, Kokomo; Miss Winona Dodd, South Bend.

On Arrangements for attendance upon the National Teachers' Association at Buffalo: Edward Ayres, Lafayette; R. I. Hamilton, Huntington; John W. Carr, Anderson; James H. Henry, Warsaw; Calvin Moon, South Bend.

Music for the morning was furnished by the following gentlemen, all supervisors of music, Louis Eichhorn, Bluffton, W. E. M., Browne, Knightstown; J. S. Bergen, Lafayette and W. J. Stabler Richmond.

Friday afternoon was devoted to section meetings. At 4 p. m. a large number of teachers visited the Soldiers' Home and were most delightfully entertained by the excellent band.

FRIDAY EVENING—Long before the time set for the beginning of the program the large auditorium was filled. Every available space was used and many went away.

The speaker of the evening, Col. Francis W. Parker, was greeted

with hearty applause. Many senseless methods that are in vogue in some school rooms to-day were exposed by the Colonel's stinging sarcasm. Errors in teaching, before hidden, became conspicuous when set out and tried by the standard of common sense. Gauging a child's standing by per cents. received much ridicule.

In opposition to this, however, he pictured the ideal teacher and school. The ideal school is one in which children are allowed to grow naturally and beautifully in an atmosphere of love. It is where no element of discord can come to arouse any ugly emotion in a child, but rather where circumstances are so placed about him that only the good in him will develop, the evil will disappear. Foster the true, the good and the beautiful and there will be no room for that which is bad.

Not a teacher present but felt that his life and calling were placed upon a higher spiritual plane, by listening to Col. Parker.

At the close of the program, the report of the committee on nominations was read and adopted as follows: President, W. R. Snyder, Muncie; vice-president, Miss Mary Welch, Mishawaka; treasurer, W. A. Millie, Attica; recording secretary, Miss Jennie E. Hoover, Hartford City; R. R. secretary, A. D. Moffitt, Decatur.

Immediately upon the adjournment, the teachers and school officers of Marion tendered the visitors a reception in the rooms of the Commercial Club. A delightful evening was spent, meeting new and old friends.

SATURDAY MORNING —After the singing, Rev. H. F. McDonald read a scripture lesson and led in prayer. Prof. Hershey delighted the Association with a vocal solo.

Dr. Chas. McMurry, of Normal, Ill., then took up the subject of "Concentration." Printed syllabi had been prepared and distributed, and the talk was on these points. He illustrated the teaching of relations, by instancing the usual way in which the multiplication tables are taught. Studies have been too much isolated. It is necessary perhaps for certain lines of research that studies be set apart, but it is of more general importance that they be taught in their relations to other studies, and their relations to life. Concentration binds every study by many relations to other studies. Teaching relations is forging links of association. He cautioned the teachers against a too hasty and radical change of the school course. Any re-organization must be gradual and tentative. The lecture was given the closest attention by the large number present and was most enthusiastically received. No other address of the Association aroused more thought or will do more good.

Col. Parker and Mr. Edson made a few closing remarks.

The following resolutions were adopted:—

1. That we express our appreciation of the hospitality of the good people of Marion and to Supt. Weaver and his teachers for their efforts to entertain us, and especially for the reception at the Commercial Club rooms.

2. We extend our thanks to the local press for their more than usual courtesy and for their very full reports of the proceedings of all the meetings.

3. That we express our hearty appreciation of the good music furnished.

4. That the immense attendance at this meeting and the enthusiasm manifested, augurs the educational future of Indiana.

J. J. ALLISON, Chairman,

JAMES SCULL, Secretary.

Elkhart was chosen as the next place of meeting.

An enrollment of 1,075 attests the interest of teachers and school officers in this Association.

The congregation joined in singing the doxology and the meeting was at an end.

CALVIN MOON, President,

FLORENCE WALLING, Secretary.

HIGH SCHOOL SECTION.

The High School Section met April 3, at 1:15. The meeting was called to order by the president, O. B. Zell, Clinton. After brief discussion, Mr. Miller of Peru submitted a constitution which after being read was unanimously adopted. The following officers were elected:

President, A. U. Crull, Huntington; vice-president, U. H. Smith, Anderson; secretary and treasurer, Miss Maud Ellis, Goodland. Executive Committee: Russell A. Bedgood, Lafayette; J. Z. A. McCaughan, Kokomo; Geo. A. Talbert, Laporte.

U. H. Smith then read a paper entitled, "Mathematics in the High School." The discussion was opened by M. H. Stewart, Sheridan, and was followed by general discussion.

The next paper was by B. B. Berry, Fowler. A general discussion followed. The subject, "English in the High School," was presented by Miss Florence Wilde, of Alexandria. Prof. W. E. Henry, of Franklin College, was then asked to speak upon the subject.

Adjourned.

O. B. ZELL, Pres.,

MAUD ELLIS, Sec.

VILLAGE AND COUNTRY SCHOOL SECTION.

Meeting was opened by song, "Blest be the Tie That Binds." Secretary being absent, C. W. Kendall was elected. The following gentlemen were appointed to elect officers for the next meeting: John O. Lewellen, Muncie; John H. Bair, South Bend; E. G. Bonnell, Marion.

1. President's address.

2. The Need of Professional Work in the Common Schools, R. M. Van Natta, of Monroeville. Discussion led by Ex-Supt. Gardner, of Cass county, followed by Supt. J. O. Lewellen. Recitation, "Willie Bear," by Miss Pearl Hatt, of Marion.

3. Sources of Interest to be Found in the Teacher's Work, Israel Hatton, of Dayton.

Report of committee on nominations: President, Geo. W. Miller, Kokomo; secretary, J. W. Dragoo, Muncie. Executive Committee: C. J. Brown, Union Mills; L. D. Kelley, Montpelier; C. W. Kendall, West Point. Adjourned.

C. W. KENDALL, Sec.

GRADE SECTION.

At 1:30 o'clock, J. N. Glasscock, president, called to order the largest section meeting of the Association. Standing room was at a premium in the large auditorium. Officers for '97 were elected as follows: President, Miss Lenora Cox, Logansport; vice-president, F. L. Jones, Tipton; secretary, James T. Hood, Marion. The following resolution signed by W. H. Doty and B. J. Bergen was adopted, viz.:

That this section of our Association petition the State Association to set apart a time for a grade section in the State Association.

"The Course of Study," a paper by D. W. Thomas, of Elkhart, occupied first place on the program. His introduction was a racy, sunny, yet sarcastic, picture of the confusion confounded, that exists in the mind of the ordinary pedagogue as he contemplates the changes from the old to the "new." His argument took text from Tennyson's "Little flower in the crannied wall." His peroration showed him to be a supporter of the new course of study with some mental reservations as to details.

The discussion of the paper by Supt. W. C. Bellman, of Hammond, took the form of an explanation of some points in the new course. The value of this document was doubtless very much augmented by Mr. Bellman's earnest talk. That the course is suggestive rather than authoritative, had not before been so well shown. The speaker paid respects to the state's adopted text-books with a rather stiff bow.

Prof J. N. Bachtenkircher with board and crayon demonstrated his method of teaching penmanship. His system is very simple; his concentration of effort on groups of words having characters of like forms is commendable. Adjourned. H. G. WOODY, Sec., pro tem.

ART SECTION.

The Art Section was called to order at 1:30 P. M. by the president, Miss Alice Hill, South Bend. In her opening remarks, she spoke of the influence of different lines of study upon character building. The thought was developed that it is the spirit that transforms. The child may pursue, in a thorough manner, his studies, but it is only by contact with a greater mind that he develops.

Mr. F. H. Simons, of Laporte, began his talk with remarks concerning the self-activities of a child and their relations to his environments. In speaking of ornament, Mr. Simons emphasized the thought of honesty. There is no true art in imitating, in rearing columns of brick, coating with plaster and graining them to simulate marble pillars. Ornament should also be appropriate. Swimming fishes on dinner plates, moonlight scenes on a soup service are out of place.

"Graphic Art in the Primary Grades," by Miss Collins, touched upon drawing as an easy language for a little child. She made a plea for the better training of pupils in this natural mode of expressing thought.

In "Correlation of Drawing with Common Branches," Mr. Moran, of Osceola, spoke at some length of the inter-dependence of these different studies. He uses drawing not only in representation, but makes

it an expression of the child's thought. A difficult problem can often be simplified to a child by a quick sketch. Botanical study may be made more precise and careful by requiring drawings to supplement the lesson. As drawing is the language of form, a language which all who see may understand, it should be used as the great interpreter of our school work.

Following the custom, Miss Hill appointed Mr. F. H. Simons the president of the section the ensuing year.

MISS ALICE HILL, Pres.,

FLORENCE WALLING, Sec., pro tem.

SOUTHERN INDIANA TEACHERS' ASSOCIATION.

The twentieth annual meeting of the Southern Indiana Teachers' Association was held at Washington, Ind., April 9 and 10, 1896. On Thursday evening a crowd of people consisting of teachers and citizens of Washington assembled in the opera house. The exercises were opened with a beautiful chorus by trained voices, followed by the invocation. Another song, well rendered, and two violin trios preceded the warm welcome from the mayor of the city.

The retiring president then introduced the president-elect, A. E. Humke, of Vincennes. In his able inaugural the president called to the minds of his hearers, three men, Horace Mann, the one hundredth anniversary of whose birthday is near at hand, Thomas Arnold, made famous in "Tom Brown's School-Days" and our own beloved Emerson. These three men, educators in the highest sense of the word, have done much to raise the educational standard.

At the close of the address, the Kankakee poet, W. W. Pirimmer, gave pleasure to all present by a number of recitations.

Friday morning, promptly at 10 o'clock, the president called the meeting to order. A pleasing chorus was rendered by the high school girls. After the invocation, a quartette sung by the high school boys was so well received that they were called back.

Dr. Weatherly, of Bloomington, was next introduced and read a paper on "The Interrelation of Geography and History." He emphasized the necessity of the study of the inter-relation of geography and history, not only in philosophic interpretation, but also in practical teaching. Ignorance of history makes it impossible for the teacher to teach geography and vice versa.

The earnest discussion which followed showed that the teachers had been thinking along the same line and were ready to put the suggestions into practice.

Supt. W. D. Kerlin, of Worthington, in his paper on "The Ethical in School Work," showed how everything connected with the school work might be used to form ideas of good and good habits in the child's life.

After a rest for social purposes, E. A. Remy delighted the teachers with selections from Riley, rendered in his usual pleasing style.

A short talk on the subject of "Individualism in Teaching" was

given by Mrs. Hornbrook, of Evansville. She said: "Individuality and uniformity are clashing. The fixed school system is crushing the life out of our children." Her plea was strong that the bulk of the teacher's attention should be given to the individual in the class rather than the class as a whole.

A paper was next read urging the establishment of a National Art University at the Lincoln homestead in Spencer county, Indiana. A Committee was appointed by the president to plan for such a movement.

The afternoon session was opened by two beautiful selections by the Osceola Club. State Supt. Geeting's address on "Observations and Experiences in the Past Year" was practical and inspiring. He said the essentials a teacher must possess are faith in herself, in her pupils and in the work she has to carry out.

The next paper on "The Relation of Pulpit and Press" by Philander McHenry, called forth a hearty discussion and the sentiment seemed to be that the pulpit, press and school should work more in harmony since they are but institutions to accomplish the same purpose.

Miss Jennie Day, of New Albany, in her paper, "The Esthetic in School-work," spoke especially of the need of teachers' having a training in the arts, so that they might know how to impart a love for it to the child, since the love of the beautiful can but make the child better.

Miss Burton, connected with the Louisville Free Kindergarten gave a bright talk on the subject which lay so near her heart.

The last paper of the afternoon, "Scientific Method in Teaching History," by Supt. Mott, of Madison, was full of strong and suggestive points.

The evening session opened with a chorus of high school voices, and an invocation by Rev. Kelso. The audience had a rare treat in the rendition of several solos by the violinist, Walter Crow.

The leading feature of the evening was the address by Prof. Sampson, of the Indiana University. His suggestions as to how to read and what to read were truly valuable.

After music by a male quartette and a recitation by Supt. Pfrimmer, unfinished business was attended to. The following officers were elected: President, Supt. W. H. Senour, Brookville; 1st Vice-President Mrs. Adelia R. Hornbrook, Evansville; 2nd Vice-President, Miss Sallie Head, Washington; Secretary, Miss Janie Deming, Shelbyville; Treasurer, Supt. J. A. Carnagey, Columbus.

So closed this most pleasant and profitable gathering of the teachers of Southern Indiana. It was also the largest enrollment, reaching 612. Franklin was selected as the next place of meeting.

A. E. HUMKE, Pres.

ANNA WARD, Sec'y.

THE sixth annual meeting of the Indiana Philological Society will be held in the State House at Indianapolis, May 8-9. All interested are cordially invited.

It is a capture of the child's thought. A difficult problem can often be simplified to a child by a quick sketch. Botanical study may be made more precise and careful by requiring drawings to supplement the lesson. As drawing is the language of form, a language which all who see may understand, it should be used as the great interpreter of our school work.

Following the custom, Miss Hill appointed Mr. F. H. Simons the president of the section the ensuing year.

MISS ALICE HILL, Pres.,

FLORENCE WALLING, Sec., pro tem.

SOUTHERN INDIANA TEACHERS' ASSOCIATION.

The twentieth annual meeting of the Southern Indiana Teachers' Association was held at Washington, Ind., April 9 and 10, 1896. On Thursday evening a crowd of people consisting of teachers and citizens of Washington assembled in the opera house. The exercises were opened with a beautiful chorus by trained voices, followed by the invocation. Another song, well rendered, and two violin trios preceded the warm welcome from the mayor of the city.

The retiring president then introduced the president elect, A. E. Hanks, of Vincennes. In his able inaugural the president called to the minds of his hearers, three men, Horace Mann, the one hundredth anniversary of whose birthday is near at hand, Thomas Arnold, made famous in "Tom Brown's School-Days" and our own beloved Hamilton. These three men, educators in the highest sense of the word, have endeavored to raise the educational standard.

After the president's address, the Kaukaee poet, W. W. Pfriemmer gave poems, which were presented by a number of recitations.

Being promptly at 10 o'clock, the president called the meeting to order. A pleasing chorus was rendered by the high school girls. After the invocation, a quartette sung by the high school boys was so well executed that they were called back.

Weatherly, of Bloomington, was next introduced and read a paper on "The Interrelation of Geography and History." He emphasized the necessity of the study of the inter-relation of geography and history, not only in philosophic interpretation, but also in practical teaching. The inter-relation of geography and history makes it impossible for the teacher to teach geography and history.

A discussion which followed showed that the teachers had taken the same line and were ready to put the suggestion into practice.

Mr. A. W. Worthington, of Worthington, in his paper on "The Standard of the School," showed how everything connected with the school work should be a means of good and good habits and he drew the lines for several purposes. B. A. Kerny delighted the audience with a story from Riley, rendered in his usual pleasing style.

The last talk on the subject of Individualism in Teaching was

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electd: President,

Mrs. Adelia R. Horn

Head, Supt. J. A. Carnagey,

urer, Supt. W. H. Senour,

So closed this most

of Southern Indiana.

Franklin was selected

A. E. HUMKE, Pres.

THE sixth annual meeting of the Indiana

be held in the State House at Indianapolis

cordially invited.

national holiday, and that many school officers and teachers throughout the state may desire to take part in the exercises of the day, we have thought best to change the date of the May examination from 'the last Saturday' to Friday, May 29. I am now arranging my county institute program for the summer, and shall be glad to have dates of all the institutes which I did not attend last year, so that I can arrange to attend as many as possible. The department will, for the May, June and July examinations, send out questions for the examination of high school teachers. These examinations are for the superintendents, principals and teachers of all commissioned, non-commissioned and township graded high schools, excepting teachers holding state certificates and diplomas from the State Normal School. High school teachers will not need to take the examination in the common school branches unless some of their work is in the lower grades. The high school licenses will be issued for 6, 12, 24 and 36 months, according to standard of licenses in the common branches. Applicants will be allowed to use the book in answering the questions on 'The Tempest,' beginning with the May examination. Notice of this should also be given."

PERSONAL.

G. W. NEET has been elected superintendent of Spiceland Academy for a term of five years at an increased salary.

J. W. TRITTIPO, of McCordsville, having taught eighteen years, stopped teaching and is now making a first-class trustee.

MISS L. A. MELBENCH, principal of the high school at Columbia City, has been promoted to the superintendency for next year.

W. H. SENOUR, superintendent of Franklin county, was elected superintendent of the Southern Indiana Teacher's Association for next year.

GRANT BEECHER, of Miami county is spending the spring term in Indiana University. He says that his county now has fifteen representatives at Bloomington.

W. R. SNYDER, superintendent of the Muncie schools, was elected president of the Northern Indiana Teacher's Association, which will be held at Elkhart next year.

P. H. KIRSCH is closing his fifth year as superintendent of the Columbia City Schools, and a good judge says the schools are in a good condition. He has done faithful, efficient work and stands high as a student, teacher, superintendent and citizen.

E. A. REMY, of the Columbus high school, has bought a half interest in a Seymour paper and at the close of the school year will move to Seymour and give his entire time to editorial work. The teacher's profession is always sorry to lose such men.

GEO. P. BROWN, editor of the *Public School Journal*, recently made

the JOURNAL office a pleasant call. Mr. Brown was for many years one of Indiana's leading educational spirits and his influence is still felt. He still has a host of Hoosier friends who are always glad to see him.

MISS LYDIA HALLEY died March 30th, at the home of her sister in Jeffersonville after a long illness. She had taught in the public schools of Indianapolis and Jeffersonville for the past thirty years. She was one of the best teachers, inspiring in those she taught a love for all that is good and true.

MISS BELLE THOMAS, editor of the "Cook County Normal School Envelope" and who is well known to many Indiana teachers through her institute work, recently paid the JOURNAL office a friendly visit. She will soon go to North Carolina for some institute work, and then to Colorado. She has several engagements in Indiana this coming summer.

A. W. EDSON, agent of the State Board of Education for Massachusetts, who was one of the principal instructors of the N. I. T. Association, made a favorable impression on all who heard him and especially on those who met him. He is an unusually pleasant speaker, and during the half-day that he had the floor, the teachers listened with pleasure and profit. He will be welcomed to Indiana again.

FRANK F. HEIGHWAY, superintendent of the Lowell schools, has recently been elected superintendent of the schools at Crown Point for next year, *vice* J. J. Allison, resigned. Mr. Heighway feels a little elated over his election as there were *sixty-four* other applicants for the place. He holds a life state license and also a life license in Chicago, and is not yet satisfied, but will spend the summer in the pedagogical department of Chicago University.

GEO. W. HOSS, formerly editor of this JOURNAL and formerly State superintendent of Indiana, and formerly president of the Kansas state normal school, is now at the head of a school of elocution and oratory at Wichita, Kansas. His Indiana friends remember him kindly and they will be glad to know that he looks back to his Hoosier days with unqualified pleasure. Prof. Hoss has an article on another page of the JOURNAL which all will be glad to read.

J. F. KNIGHT has tendered his resignation as superintendent of the LaPorte schools to take effect at the end of the school year, but not to enter some other calling as announced in last month's JOURNAL. He expects to continue in school work. The local papers speak of Mr. Knight's work in the most complimentary terms and say that the schools were never in a better condition. It is to be hoped that he will find a good position without going out of Indiana.

COL. F. W. PARKER, of the Chicago Normal School, made the evening address at the N. I. T. Association, and as always had a delighted audience. The Colonel is not noted for his close reasoning or logical thought, nor is he specially noted for sticking close to the text, but he is noted for striking hard blows. When he sees a weak place in an old

time-honored method, he hits it and hits it hard, regardless of consequences. In this way he makes some enemies but he does "a power of good." May the Colonel live long to continue his good work.

CHAS. A. MCMURRY, of Normal, Ill., who occupied most of the Saturday forenoon at the N. I. T. Association in talking of "Concentration," was cordially received and eagerly listened to. His "General Method" and his articles in the JOURNAL had made most Indiana teachers acquainted with him, so he did not come among strangers. Mr. McMurry does not deal with surface questions, but discusses general principles that underlie all educational work. His talks are always suggestive and helpful, whether the listener agrees with him in all his conclusions or not.

W. D. WEAVER, superintendent of the Marion schools, extended his already large circle of friends by his courteous manner and his unselfish devotion to the welfare of those who attended the late Northern Indiana Teachers' Association. One of the local papers gave him a "write-up" while the association was in session, from which we learn that he was born in New York in 1856 but removed to Jennings county Indiana, at an early age. He was educated at Franklin College and began active life as a Baptist minister. While in charge of a church at Marion he was elected a member of the school board. In the early part of 1890, when Supt. J. K. Walts died, Mr. Weaver was asked by the other two members of the board to do the work of the superintendent for the remainder of the school year. This he did with so much satisfaction that in June he was elected to the position and has held it ever since. When Mr. Weaver took charge of the schools Marion employed twenty-six teachers; now it employs sixty-seven. The general verdict of visiting teachers was that Marion schools are in good condition and do Mr. Weaver credit.

BOOK TABLE.

GRIMM'S FAIRY TALES.—Part II. Edited by Sara E. Wiltse, and published by Ginn & Co., Boston. Miss Wiltse has eliminated from these stories their objectionable features. She appeals especially to the moral nature of the children in each story given. There are seventeen stories in all, among which we recognize our old acquaintances: The Boots Made of Buffalo Leather: Little One-Eye, Little Two-Eyes and Little Three-Eyes; The Goose Girl at the Well, etc. This volume is uniform with Ginn & Co.'s Classics for Children.

"THE MEANING AND METHOD OF LIFE," or "A Search for Religion in Biology" is the title of a book by Geo. M. Gould, A. M., M. D. and published by G. P. Putnam's Sons, New York. The following headings to some of the chapters will indicate the scope of the book: Physical and metaphysical, partial truths, sensation, evolution, reproduction, concerning evil, immortality, ethics, sleep, dreaming and awakening.

The author holds some peculiar views that most readers will question, but all will concede that the book is full of valuable suggestions. Any thoughtful reader who wishes to do some work in a new field will find the book full of interest from start to finish.

MANN'S SCHOOL RECREATIONS AND AMUSEMENTS.—This volume not only opens up a new field of much needed information and direction in the matter of physical training of pupils, but also provides intellectual recreations which will add to the interest and value of school study. The book, if practically used, will lend a charm to school life in all its phases. It is adapted to schools of all grades and to high schools and academies. Under the head of Morning Exercises, are included appropriate devotional exercises, responsive roll-calls with quotations from authors, brief discussions of important news of the day and of notable events of current history, etc. It discusses indoor exercises and outdoor games, literary exercises, geographical and historical recreations, etc. It is published by the American Book Co., 352 pages. Price, pre-paid, \$1.00.

OLD STORIES OF THE EAST—Told by James Baldwin. Published by the American Book Co., Cincinnati, New York and Chicago. In this volume, Mr. Baldwin tells in an attractive manner the old stories from the Hebrew Scriptures. These stories have been so inseparably connected with church and Sunday School, that children and many grown people connect them inseparably with formality and dullness. Mr. Baldwin has re-told these stories from a literary standpoint. He has endeavored to make Cain and Abel, Moses and Aaron, etc. real men, living in just such a world as we live in and having like passions with ourselves. The book contains twelve stories, each wholly independent of the others, and yet there is a continuity from the first to the last, giving to the collection the completeness of a single narrative. In short, the book comprises the history of the origin of the Hebrew race, of the chief events connected with the life of that people down to the period of their greatest prosperity. Price 45 cents.

Tired Brain

Horsford's Acid Phosphate

A brain food. It increases the capacity for mental labor, and acts as a general tonic. It rests the tired brain and imparts thereto new life and energy.

Dr. O. C. Stout, Syracuse, N. Y., says: "I gave it to one patient who was unable to transact the most ordinary business, because his brain was 'tired and confused' upon the least mental exertion. Immediate relief and ultimate recovery followed."

Descriptive pamphlet free on application to **Rumford Chemical Works, Providence, R. I.** Beware of substitutes and Imitations.

For sale by all Druggists.

LIFE OF HORACE MANN by A. E. Winship, editor of Journal of Education and published by the N. E. Publishing Co., is just before us. This little volume of only 100 pages gives a very fair estimate of the life and work of Mr. Mann, so far as his work in Massachusetts was concerned; but his estimate of what he did for higher education and especially for the higher education of women at Antioch College, is inadequate and misleading. Those six years at Antioch, with from 300 to 400 young men and young women, under him in a new college, entirely free from tradition and prejudice, enabled him to do what few college presidents have been permitted to do in the same length of time. The price of the book is only 50 cts. The same company publish a large picture of Horace Mann, that is very good indeed, which they send pre-paid for 50 cts. Hundreds of teachers will want both the book and the picture.

BUSINESS NOTICES.

IN this issue there appears an advertisement of the Bay View Summer School which will interest all teachers. Bay View has become very popular with Indiana teachers, hundreds of whom go there every summer, because of its delightfully invigorating climate and the advantages of the great assembly and summer school. 5-1t

SCHOOL BOARDS contemplating changes can learn the address of the best Western and Eastern teachers, willing to change places, by addressing Orville Brewer, manager of the Teachers' Co-operative Association, 101 Auditorium Bldg., Chicago. We can assure all who write of confidence and honorable treatment. 2-tf.

IF YOU WANT to be successful in business life attend the Indianapolis Business University, the leading Business, Shorthand and Penmanship School 11-tf

TEACHERS can secure profitable employment with Heeb Publishing Co., Indianapolis. High class works; big pay. Write for information.

THE MUNGER. On another page will be found the advertisement of the Munger Cycle Company. There is no doubt that this company makes the best light wheel in the market. Only the best of material is used and every wheel is "high grade." It always pays to get the best. It is the cheapest in the long run. Call at office or write for descriptive circular.

GENTLEMEN who desire to accept profitable employment either during vacation or permanently may find it to their advantage to address the American Collecting and Reporting Association, 41-42 Baldwin Block, Indianapolis. The manager of this agency Bradford A. Bullock was for several years a teacher in the schools of this state, and will cheerfully furnish particulars to persons enclosing stamp to this address. 3-3t.

AGENTS WANTED—Williams Portrait Co., 426 W. Van Buren St., Chicago.

TEACHERS CO-OPERATIVE ASSOCIATION 101 The Auditorium Building -- CHICAGO --

**ESTABLISHED IN 1884.
POSITIONS FILLED, 4,000.**

Seeks Teachers who are ambitious for advancement rather than those without positions.

INDIANA SCHOOL • JOURNAL

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CONSCIOUS CORRELATION.

JACOB MARTIN, PLYMOUTH, IND.

The Great Teacher said, "I came that ye might have life, and that ye might have it more abundantly."

I take it that this is the text upon which all true teaching is founded. The pupil must become alive to the world, i. e. he must come into correspondence with it; or adjust himself to it; or, in other words, he must come to know it in its relations. Since these relations are so many and complex, the field of the student is a very large one.

The universe is composed of me plus my environment, or of you plus your environment, or of a stone plus its environment. While the relations between an organism and its environment are normal, they are said to be in correspondence. Every thing has a more or less complex correspondence with its environment, as it also has a greater or less power to adapt itself to changed conditions. Every organism has certain vital correspondence with its environment, which must adapt themselves to changed conditions or death will ensue.

Herbert Spencer, thinking on this line, defines life to be a correspondence with environment, and death as a dropping out of correspondence.

You will observe that this definition is in exact harmony with the doctrines of the Great Teacher. "I came that ye might have life and that ye might have it more abundantly." That is He came that we might come into correspondence

with, or in touch and harmony with a larger field of our environment, and finally into correspondence with the only perfect environment, which is to know God.

Now we may live, that is, exist as a living organism, and have only a few vital correspondences with our immediate surroundings; but we cannot have that fullness of life without an intimate correspondence with the whole field. Environment may be thought of as divided into two divisions; that which gives existence, and that which gives quality to life. We may give clearness to the thought by saying that wheat, water, air etc. make vitality possible; while our accumulated history, literature, science, tradition, social customs, and legends give quality to our lives. And the degree of one's life depends upon the degree of his correspondence with these things.

Now, I understand it to be the function of the teacher to lead the child into this fullness of life, or in the language of science, to bring the child into a complete correspondence with his environment. The ideal teacher, then, is in complete and perfect relation with all nature, the only example being Christ. It is clear, then, that the teacher must so correlate the subject-matter he places before the mind, that the mind may grasp every idea in its fullest relations, and thus bring that mind into broader correspondence with its surroundings.

The mind acts largely upon suggestion. The grandest truths of nature may lie undiscovered before us, the simplest relations be unseen, and only for want of suggestion. In proof of this, it is only necessary to mention the case of our common inventions. We invariably remark, "how simple! I wonder it was not discovered long ago." It was simply this, the mind was not in correspondence with its environment. It was dead to the simplest relations, and had to be brought into that more abundant life before these simple truths could be discerned. So may facts fill the mind without it having a suspicion that there exists a most intimate and vital relation between them. A great gulf often separates ideas intimately related.

Suggestion is made in many ways, by proximity in time or place, by inference, analogy, etc., etc. Now the true

teacher will place before the mind of the pupil such related matter, in such a manner as to give suggestion to the mind in the most natural way, of all these beautiful relationships, so delicately adjusted, and of so vital importance. No teacher, for example, having in mind the correlation of ideas, would teach common and decimal fractions separately and as separate divisions of mathematical operations. To do so would be to set them up as two mental objects with identity as an impassable gulf between them.

There is a climax in mental activity. I mean by this that mental activity does not reach its heights at the first impulse; but as the waves of the sea grow higher and higher as the storm continues, so mental activity requires time and continued stimulus to become intense. The orator knows it, and does not at once soar into the heights of feeling, or thrust forth the shafts of his satire. But he leads his auditors through devious and winding paths, now down a gentle declivity, then up the hills beyond and finally to the very heights of feeling.

The teacher should recognize the same law, and bring to bear upon any given topic of thought all related topics. As the related topics troop in from geography, history, literature, biography, science, etc., a mental momentum is acquired, so to speak, which acts as suggestion to the mind and many beautiful and vital truths appear which would otherwise have remained undiscovered. The mind becomes thoroughly heated and can then be worked, character is then formed. The mind gathers relations it had not suspected and truly "lives more abundantly."

A beautiful example of the broadening influence of true education is found in Lowell's Vision of Sir Launfal. Sir Launfal set out in search of the Holy Grail, typical of the highest end of life. As he started out in early life all aglow with youth, and armed in glittering corselet and steel, he beheld a leper by the gate asking alms.

"And a loathing over Sir Launfal came;
The sunshine went out of his soul with a thrill,
The flesh 'neath his armor 'gan shrink and crawl,
And midway its leap his heart stood still
Like a frozen waterfall;
For this man so foul and bent of stature,

Rasped harshly against his dainty nature.
And seemed the one blot on the summer morn—
So he tossed him a piece of gold in scorn"

Note the spirit in which he gives.

Long years after Sir Launfal returned to his castle a bent old man. He had been through the school of the world, and had come into closer touch with mankind, or into closer correspondence with environment, or into correlation with surroundings. In fact, he "lived more abundantly." Again he met the self-same leper, but notice in how different a spirit:—

"I behold in thee
An image of Him who died on the tree;
'Thou also hast had thy crown of thorns,—
'Thou also hast had the world's buffets and scorns,—
And to thy life were not denied
The wounds in the hands and feet and side:
Mild Mary's Son acknowledge me;
Behold, through him, I give to Thee!"

He entered his castle which had been so cold that the sun of centuries could not warm it, and at once it became a place of cheer and warmth and sunshine and gladness. He had found the Holy Grail. He had entered that more abundant life, he had become correlated to his fellows and was now in correspondence with his environment. He had passed from death unto life.

While the illustration applies only to the feelings, the principle is equally true with regard to the intellect.

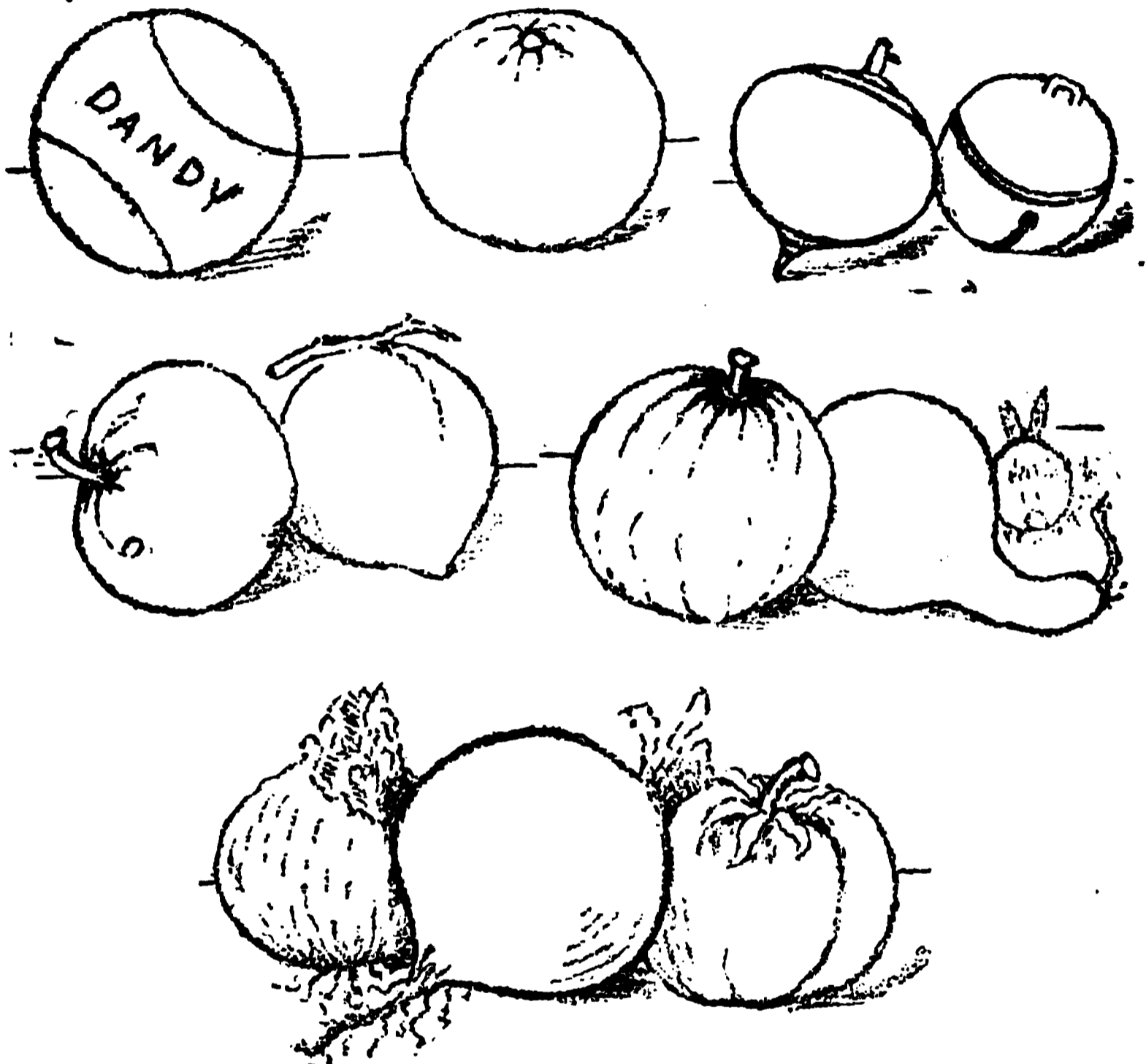
How to bring about the realization of this higher life within the short space of the formative period of the child life, is the great problem of the teacher. With the high end of education unconsciously in view, he must prepare the curriculum of studies, and the daily lessons, with proper discrimination of what is valuable and related, and with reference to the conscious end in view.

It is no longer sufficient that a teacher begin at the first page of the texts and take lesson after lesson until the text be finished. He must prepare his plans on the different lines and then seek the material for their elaboration.

The best part of our knowledge is that which teaches us where knowledge leaves off and ignorance begins.—O. W. Holmes.

PUBLIC SCHOOL DRAWING.

W. T. PARKS, DENVER, COL.



The first thing for a teacher to do in giving a lesson in drawing is to create an interest in the object to be studied and drawn. I say studied and drawn, because every object to be drawn should be thoroughly known as to form, by the pupils before they attempt to draw it; in other words, they should have a clear idea of what is to be done before making an effort. He who knows well will not, with reasonable practice, draw very poorly.

Supposing the object to be a sphere or any object based upon the sphere, the teacher may step before his pupils, especially if they are small, and tell them a short story about the nature of it; for instance, what it can do, how it acts under certain circumstances, what it likes and dislikes, how it differs from other objects, etc. It is best to compare spherical

objects with cubical ones and *vice versa*; as they have the same diameters in every way, yet differ very greatly. The teacher should make a thorough study of both as to similarity and differences, in form, character of surfaces, feeling when handled, action when set in motion and appearances in different positions to the eye; and the pupils should be allowed to see and feel the objects themselves—nothing should be second hand to them where it is practicable for them to get it first hand.

The teacher's short story should be told with the object out of view. If the object is shown the pupil should be led to tell the story, the teacher directing his thoughts by judicious questions. Don't try to exhaust a subject at once, simply get or give enough information for the purpose and excite sufficient interest and proceed to draw; take up other phases and features at other lessons.

To give the pupils an idea of the outline of the sphere wrap a string around it and ask them the shape of the string; of course, they will see at once that it is a circle, or, tell them to imagine a fly walking around the ball and ask the shape of its path. Then ask them all to make a line the shape of the string or fly's path.

Have them do considerable practicing on the circle at various times until they can make it freely, rapidly and quite accurately.

Don't allow any slow, cramped work. It is well for the teacher, especially at first, to make a rapid drawing of every object represented on the board in the presence of all; let the pupils observe it a moment, then erase before they begin to draw. This encourages them and helps them to see properly; but *they* should *always* be required to draw from the object. Have them hold their pencils so that the ends of their fingers are at least two inches from the point. At first insist on simple outline work with just enough of the characteristics of the object to make it recognizable—*very carefully* avoid much detail; in other words, represent the object by as few lines as possible; after drawing the sphere have them draw balls, oranges, apples, etc. There are hundreds of objects spherical in form. The illustrations at the beginning of this article will give an idea of the work but are not to be copied.

Study to make the work interesting and keep in the lead, and the pupils will follow and you will be surprised at your success.

Don't say you can't draw; *anybody* can draw with proper effort and it doesn't take much. You *must* learn; you cannot teach drawing successfully unless you can successfully draw some, but you don't need to be an artist. Try it and let me know how you are getting along.

"THE PROBLEM OF THE INSTITUTE."*

F. D. CHURCHILL, OAKLAND CITY.

The question is—What is the matter with the county institute? In the opinion of the committee that made this program the answer evidently is *not* that it's all right, for if that *were* the answer they would not have placed it on the program and called it a *problem*. The fact that they have called it a *problem* is sufficient evidence that they think there is something about it that needs to be solved. In other words, in the opinion of the committee something is the matter with the institute. When something is the matter with you, you say you are sick. I suppose it will not be improper to use the figure and say that in the opinion of the committee the institute is sick. When you are sick you call in a doctor to diagnose your case and prescribe a remedy, and if you are very sick you call in another doctor to consult with the first, and if you are very, very sick you call in another doctor to consult with the first two, and if you are *awful* sick you call in another to consult with the first three and then you have *four*.

In the opinion of the committee *their* patient must be *awful* sick for they have called in consultation four learned doctors to diagnose the case and prescribe a remedy. The wisdom of the committee is manifest not only in calling the consultation, but also in the doctors they have called. There is only one drawback--and that is that the patient over whom this consultation is to be held is attended in the state of Indiana by ninety-two different nurses, each of whom has the authority to follow or not to follow the directions of the doctor, as

his sweet will may dictate. This fact, however, will not deter the doctors from doing their whole duty and then if the medicine is not given according to directions and the patient dies, the responsibility will not be with the doctors.

In the opinion of the first doctor who speaks, the disease that is afflicting the county institute is the disease of *general unprofitableness*. I am not here to-day to make a reputation—my reputation is made—I am here to tell the naked truth, and so I repeat that the county institute is afflicted with the idea of *general unprofitableness*.

Oh, I know that at the close of each institute season the instructors vote by a large majority that the institute is a great success, and the school journals do likewise, but you get down among the teachers—the teachers who have to furnish the audience, the teachers who have to endure the speeches, the teachers who have to foot the bills, the teachers for whom the institute is supposed to exist and what do they say? Large numbers of them say that they have not been repaid for the time and the expense of attending—they say that they have gotten little or nothing that will make them better teachers next year than they were last. At least, that's what they say in places where I have been and I have been several places.

Without his permission, I shall take the liberty of quoting the president of this meeting as having said to me that at the close of an institute in which he has worked he feels that, perhaps, he has profited ten or a dozen teachers, and the others he has not profited. Now ten or a dozen teachers is a very small per cent. of the teachers in any county, and if the best, the most efficient instructor in the state profits but ten or dozen what profit, I want to know, can be expected from the *pop-gun* instructors of the state; and their name is legion and I am one of them. Doesn't anyone who knows anything about it at all *know* that if the county superintendent did not have in his hand that *club—the licensing power*—that he would not have an attendance at his institute? Let it be understood that absence from the institute will in no way affect the teacher's chances of getting a good license and a good school and how many, think you, would attend from choice for the benefit that they expect to derive? In my opinion, under the con-

ditions I have named, instructors would have to talk to many empty benches. Nor would all the absentees be those without devotion to their work, but many would be teachers who love their work and they would be absent because they have learned from sad experience that to attend does not pay.

The county institute is unprofitable and in the nature of the case it cannot be otherwise. Why? Because of its composition.

The county institute, as to its composition, is a medley indeed. On the one extreme there are the young man and the young woman who have never taught school—who have no experience, little scholarship and little or no skill. On the other extreme there are the teachers of large experience, high scholarship and great skill. Between these two extremes there are teachers of all grades of scholarship, all degrees of skill and all grades of experience. These teachers with such varied attainments do not want and do not need the same kind of instruction and it is beyond the power of any instructor to give instruction to such an audience that will be acceptable and profitable to more than a few. To put all the teachers of a county together and lecture them all alike on psychology is not more sensible than it would be to take pupils from the primary grades, from the grammar grades, and from the high school and put them into one class and attempt to teach them all quadratics or some other high school subject. The few would be profited, the many would not be profited. The case is now diagnosed. What is the remedy? Manifestly the remedy is to grade the institute. Of course, there cannot be as many grades as there are grades of teachers but a few grades will be better than the present plan.

Let there be one grade in which the primary subjects are taught and let those who need the primary teaching go in that grade. Let there be another grade in which the more advanced subjects are taught and let those who do not need the primary instruction go in that grade, and then if there be a sufficient number who are so far advanced and who are so depraved in their desires as to want to hear concentration, co-ordination, correlation, unification, etc., discussed, let such a grade be established for them.

Yes, section the institute. Let the sections meet in the

forenoon and let there be, say, two, not more than three exercises. Let these exercises consist of shop talk. In the afternoon let the sections assemble and let there be *two* inspiring talks on subjects that may or may not relate to school work. In this prescription I am giving I insist that the number of daily lectures shall be diminished. In some counties at present there are as many as eight daily lectures. This is nothing less than cruelty to animals. Think of being compelled to sit in an uncomfortable room through eight lectures when the mercury is high in the nineties, and then say we are not an oppressed people. There is no profit in so many exercises. No one can digest so many if there is anything in them, and if there is nothing in them they are not worth hearing. Fewer lectures would give more time for long recesses and a long recess is a great boon on a hot day in August. Long recesses give opportunity for social enjoyment which should by no means be made a subordinate purpose of the institute. If the institute is sectioned and the number of daily lectures diminished, the value of the institute will be increased fifty per cent. and then if the county superintendents will adopt and strictly adhere to this resolution its value will be increased fifty per cent. more.—“I never will, ‘so he’p me,’ employ any man or woman as instructor in my institute who begs for the job.”

After all, the greatest thing to be gotten from the county institute, is not instruction, but inspiration. The teacher who fails to get inspiration fails to get very much that is of value. The county institute ought to be an educational *revival* meeting. Teachers should go from the institute not only desiring to be better teachers than ever before, but desiring to be better men and women than ever before.

Instructors who beg for the job do not do the kind of preaching that makes teachers have that kind of a feeling. Hence the necessity for the resolution that I propose.

When the teacher fails to meet the intellectual wants of a child, it is the case of asking for bread and receiving a stone: but when he fails to meet its moral wants, it is giving a serpent.—*Horace Mann*.

Habit is a cable. We weave a thread of it every day and at last we cannot break it.—*Horace Mann*.

COMMENTS ON THE TEMPEST.

JONATHAN RIGDON, CENTRAL NORMAL COLLEGE.

The second act introduces us to Alonzo, king of Naples, Antonio, the usurping Duke of Milan, Sebastian, the brother of Alonzo, and the honest old counselor, Gonzalo, to whose kind precaution Prospero and Miranda owe their lives. The first scene opens with words of consolation offered by Gonzalo to the grief-stricken king Alonzo. This is followed by an attempt on the part of Sebastian and Antonio to make sport of the simple-minded, but good-hearted Gonzalo. This old counselor is of a hopeful disposition and sees something to be thankful for in the most discouraging situations. He says of that lonely island—

“Here is everything advantageous to life.”

“True; save means to live,”

is the gloomy response of the black-spirited Antonio and Sebastian. The mind that looks for evil always finds it, while the good is never able to hide itself from the mind that is looking for it.

The next incident worthy of note is Gonzalo's description of his ideal commonwealth. The well-meaning but weak-minded man, like many another such, sets it forth in a series of contradictions: He would be king in it and yet would tolerate no name of magistrate, no sovereignty. He would have no kind of traffic and no service, and yet nature should bring forth all abundance. He would have no marrying among his subjects and yet his people should prosper in innocence and purity. All men and women should be idle, and yet innocent and happy. Like many another such closet-made commonwealth, its end forgets its beginning.

Through the influence of Ariel sleep falls upon Gonzalo and Alonzo and all the company except Antonio and Sebastian. Their evil eyes never sleep. They plot to take the lives of Alonzo and Gonzalo. The evil project is suggested by Antonio. This seems a very fitting retribution to Alonzo for he it was that aided Antonio in depriving the good Prospero of his dukedom. Anything we may do to aid an evil man to do evil is likely to return to us, as it should.

Antonio has become so accustomed to wrong-doing that he can laugh at conscience and boast

"I feel not this deity in my bosom,"

and that he would not allow twenty consciences to stand between him and Milan. He easily persuaded the cowardly Sebastian to kill the good Gonzalo, while Antonio himself is to kill Sebastian's brother, Alonzo. Then, of course, the crown of Naples would fall to Sebastian, from whom Antonio doubtless intends to steal it by one means or another. But Prospero through his art foresees the danger that his friend Gonzalo is in and causes Ariel to sing in Gonzalo's ear

"While you here do snoring lie,
Open-eyed conspiracy
His time doth take.
If of life you keep a care,
Shake off slumber and beware:
Awake, awake."

The second scene of this act is thought by many to be only a disfigurement to the play. It certainly is ugly enough, entirely out of keeping with the spirit of beauty that pervades the entire drama with this exception. It introduces us to another part of the island and another group of characters, the jester Trinculo, the drunkard Stephano, and the beast Caliban. It seems to me that this scene may not only lay claim to being true to life—which in the minds of many critics is the only standard of art—but that it also heightens our appreciation of the higher spiritual lives of Prospero, Miranda and Ferdinand. It is very suggestive also of the principle which we may call self-classification, by which all things tend to arrange themselves where they most fittingly belong. It is certainly not accidental that a jester, a drunkard, and a beast are thrown together. Trinculo and Stephano at first felt that Caliban was not of their kind, but they all drank, and through the mediating principle of the bottle became of one family.

Lost, yesterday, somewhere between sunrise and sunset, two golden hours, each set in sixty diamond minutes. No reward is offered, for they are gone forever.—*Horace Mann.*

PROBLEMS IN MORALS.

One of the first and highest duties of every teacher is to cultivate the moral nature, the conscience, of the pupils. In order to do this he must take frequent opportunities to set them thinking about moral questions, and forming their own conclusions, under proper guidance, about the right and wrong of things. The occurrences of school life will often supply material for discussion of this kind; but in order to secure freedom from prejudice and personal feeling, it is often desirable to present questions with which no such influences have to do. The following, taken from the *Christian World* (London, Eng.), affords a good problem of the kind. It would be curious to know how many children of average intelligence and character in a public or high school would see anything wrong in the transaction:

"Has a person who discovers that somebody else is the owner of a masterpiece of art, of the value of which he is entirely ignorant, a right to take advantage of his own knowledge and the other's ignorance to buy the work for the merest trifle? The question suggests itself by the account of the discovery of a picture of Rembrandt in France. It was left among the goods of an old lady at Pécy to be sold by auction. It had been thought worthless, but a picture-dealer who saw it discovered its value, kept his knowledge to himself, and bought it through a workingman at the sale for 4,500 francs. A few hours later he was offered 75,000 francs for it, and has now fixed its price at 250,000 francs, which, as it is pronounced by the best judges to be a masterpiece of the great Flemish painter, he will probably get."

The *Christian World* says: "In the present state of brokers' ethics, it is to be feared that, with a few honorable exceptions, all in the trade will simply envy the purchaser, and wish that such a chance might fall to themselves; judged by the ethics of Christianity, however, the transaction cannot appear other than a cruel and shameless robbery." Will not some of our readers put it to their classes, give them time to think it over, and let us know the results? It would not be a bad plan to let them express their opinions, with or without reasons, in writing.—*Toronto Educational Journal*.

LEND A HAND.

[This department is conducted by Mrs. E. E. OLCOTT.]

"Look up and not down
Look forward and not back
Look out and not in;
Lend a hand."

A YEARLY REPORT.

"June has come with its roses" and final reports! At least, June has come and the roses have come to all and final reports to some. To many, the final reports came weeks or months ago.

The report we wish to speak of, is not that which is to be handed in to director, trustee, or superintendent, but is to be filed away with one's own private papers. It is not primarily for the benefit of the school officers or one's successor, but is a clear, careful, critical estimate of the year's work, reduced to writing, for one's own benefit. Taking the studies, subject by subject, and the school, class by class, scan the school year from September to June, and, in cold black and white, report your own successes and failures. What have I taught better than last year? What not so well? What new plans have I tried? Which were successful? What new plans did I resolve to try and neglected to do so?

Such uncompromising reports to one's self would make helpful reading, by and by, clearly showing one's growth, year by year. They would show one's "evolution;" show how what one has heard and read and thought of and practiced, has blossomed and borne fruit in better teaching. Recorded triumphs are inspiring.

"Let another's shipwreck be your sea mark," says a writer; we may adapt it and say: "This year's small shipwrecks shall be next year's safe sea marks;" for, alas! we, too frequently, make the same mistakes over again. The year's report to one's self may be closed with this bit of humorous philosophy:

"If we had the year's work to do over again—
Ha! ha! if we had, but we haven't, you know—
We'd carefully study the why and the when,
And make us a friend, where we now have a foe.

"But the edicts of nature we cannot reverse,
'Tis folly vain wishes to sadly rehearse,
And—we might make mistakes a thousand times worse,
If we had the year's work to do over again."

Perhaps the following is the best thought-gem to write beneath the efforts which the year's report shows "failed to make the grade"—success:

"This I know
The year's perplexities and pain
Come back in June-time softened so
I only find new hints remain
On which to build and build again
A better plan."

STUDYING BIRDS BY OUTLINE.

LAFAYETTE, IND.

April 16, 1896.

Mrs. Olcott, Charlestown, Ind.

DEAR MADAM:--In a recent number of the INDIANA SCHOOL JOURNAL, I find an answer to a communication from one of our teachers who asks about the outline for birds. While I agree with most of your statements I take exceptions to some. One purpose of the outline was to avoid the "squeak." The machine "squeaks" when we tell pupils to write compositions before they are taught *how* i. e. to commence at the beginning and end at the ending. Neither do I think that narration is the natural or logical form of composition work. Since description logically preceds narration, why not begin composition work proper with description? The outline was made for fifth and sixth years' work. These pupils ought to have had enough elementary drill in writing to take up this work. If they have not they have not done the work in the adopted text. Description can be best written from outline but before requiring children to write, a basis must be prepared. The children must have formed the outline for themselves; they must by a series of lessons upon the object and the purpose of the description constantly in mind, have decided what attributes must be presented, in order to carry out the purpose, they must have decided upon the best order of presenting these attributes. The facts about the particular object must also be brought out in class work. The child is now ready to write. The outline does not appear formidable, but is a guide and a help to methodical writing. Without

it the pupil is likely to take up a new point before having completed the one last mentioned.

The squeak is not in having an outline but in the use that is made of it. It is making more than a tool and the thinking teacher will soon learn how to use it and to find that it helps to lay the foundation upon which future work can be built.

It is my observation that teachers who use outlines—made by the pupil—have the best work; the arrangement is more logical; the neatness and form of the papers are better; the written work does not have the bookish cast which belongs to other. I believe it aids the reasoning power of the pupil.

The use of an outline has added 50 per cent. to the character of our work in the county.

J. M. SULLINS.

A WORD OF EXPLANATION.

From the foregoing, it seems that Superintendent Sullins and I do not take the same view of where the "squeak" *may* be, that led a teacher to write: "I am unable to get from pupils ten, eleven, and twelve years of age a satisfactory description of a bird from an outline, as

A Whole	{ size shape covering color	Parts	{ head neck wings tail feet, etc.

Will you please give a description of a bird from an outline, and thereby "Lend a Hand" to one in trouble?"

I did not understand that the question referred to securing "logical arrangement," "the neatness and form of papers," nor what might be called the formal side of written work. Certainly, "arrangement," "neatness," "method" etc., hold no insignificant place in written language work. They are one of the purposes of composition writing; they are second only to the subject matter. Perhaps, I should give that phase third place in importance, for it seems to me that the pupils' *interest* in the subject, their pleasure in giving their knowledge written form, is the first requisite. Because if they enjoy composition work, they will put their hearts into

it, and without irksome drill, will improve steadily and reach the goal by a pleasant route.

I fancied the "squeak" in the case of the pupils in question, was not so much that they did not know how to "begin at the beginning and end at the ending," as that they did not know what to say, that they were not *interested* in writing about birds. I thought their teacher wished them to learn in Nature's school about their "Little Brothers of the Air."

So in the January JOURNAL, I "lent my hand" with hearty good will seeking to arouse their interest. My thought was the same as that in my article in the Journal of Education of April 2nd. "I wish you to become enthusiastic 'bird-lovers who carry an opera glass but never a gun; who observe but never shoot; and so see many queer things not set down in books.' . . . Would you look for a blue bird's nest in a tree, or bushy shrubs, or on the ground or where?"

In her charming book, "Little Brothers of the Air," Olive Thorne Miller shows how absorbing bird-study may be. But she dwells on the traits exhibited by birds, their home-life, their joys and sorrows, and not on their appearance. I can not recall, in the whole book, a detailed description of any bird. One paragraph about a robin runs thus: "The special policeman of the group and its environs was a robin, who lived in a two-story nest under the eaves of the hay-barn. This bird, after the manner of his family, constituted himself regulator and dictator. He lived in peace with the ordinary residents, but took it upon himself to see that no stranger showed his head near the spot. He chased the crow black-bird who happened to fly over on business of his own, and by calls for help brought the whole robin population about the ears of the intruder. He also headed the mob of red breasts that descended one morning upon a meek-looking, half-grown kitten, who chanced to cast its innocent eyes upon a baby robin under the trees. * * One visitor there was, however, to the fence and the locusts whom Master Robin did not molest. When the prolonged, incisive 'pu-eep' in the martial and inspiring tone of the great-crested fly-catcher broke the silence, I observed that the robin always had plenty of his own business to attend to."

With the foregoing passage, compare the following extract

from Steele's Zoology: "The following is taken from Baird, Brewer and Ridgeway as a specimen of what every thorough teacher will require from his pupils in writing about every bird that can be obtained in the immediate vicinity.

"*Turdus migratorius* [Robin], American redbreast. Tail slightly rounded; above olive-gray; top and sides of the head black; chin and throat white, streaked with black; eyelids and a spot above the eye, anteriorly white; under parts and inside of the wings chestnut-brown; the under tailcoverts and tibia white, showing plumbeous inner portions of the feathers; wings dark brown; the feathers all edged more or less with pale ash; tail still darker, the extreme feathers tipped with white; bill yellow, dusky along the ridge and at the tip. Length 9.75; wing 5.43; tail 4.75; tarsus 1.25 inches.

"Habitat, whole of North America."

Which of the quotations is the more interesting? Both may be called scientific observations of the robin, the one of his traits, the other of his appearance. Each, in its own place, with its particular end in view, is best. But which comes nearer the hearts of immature pupils?

Some years ago I was giving special attention in language work to the descriptions of pictures, objects, etc. Something seemed to be amiss, for it required so much drill, such rigid grinding questions—"outlines"—to secure creditable word-pictures, that it seemed when satisfactory compositions came in at the door, pleasure in the work went out at the window. I welcomed the suggestion in Maxwell's "Language and Composition" that "narrative and not description is the natural form of attractive composition work."

My experience is that narration is "along a line of less resistance" than description, that equally good results are reached with less drudgery. In support of Maxwell's view, it might be asked: In their play, do children *describe* things or tell *stories*? Which predominates, description or narration in the favorite literature of children?

"Little Orphant Annie" tells "witch tales" but the only approach toward describing the appearance of "gobble-uns" is, "They was two great, big black things a standin' by her side." The interest is held by the narration of the thrilling fate that overtook "the little boy who wouldn't say his

pray'rs," and "the little girl" who would "make fun of ev'ry one, an' all her blood an' kin," and the solemn admonition

"You better mind yer parents," * *

"Er the gobble-uns 'ill get you, ef you don't watch out!"

The purpose of Cadet Days (one of the Children's Reading Circle books) is to describe life at West Point. But Capt. King took care to insure interest by weaving it into a narration of the experience of "Pops Graham."

It seems to me that our aim in teaching should be to make pupils upright, intelligent and *happy*, and that, other things being equal, the pleasantest way is the best way in school work.

UNIFORM COURSE OF STUDY.--SIXTH GRADE.

R. A. OGG, GREENCASTLE.

The work of the sixth year will not need so full discussion, having the same general characteristics as that of the fifth. The history work covers the period from discovery to the Revolution. Some strong centers for this work have been fixed in the biographical study of the preceding year. With that as correlating material, they now take up the orderly sequence of events. But while events are now in mind, the great value of biography should not be disregarded. Let each strong and significant personage stand for something in the progress of events. The basis of claims to territory in the new world will make De Soto, De Leon, Balboa, the Huguenots, Drake, the Cabots, Hudson, Cartier important; and attempts to colonize will, in turn, present a second list of names and bring in to review the geography work of the previous year in locating explorations and settlements. England's method of giving charters to companies and grants to individuals in furtherance of her purpose of colonization, should have careful attention in connection with the references to the London and Plymouth companies, Lord Baltimore, Penn, Mason and Gorges, etc., and should be the occasion for studying royal, proprietary and charter governments, as these became the source of divisions and conflicts, resulting finally in entire separation from England. Proper emphasis should be given to the House of Burgesses in 1619 as indicating England's

method of dealing with her colonists in the matter of self-government; also the Union of 1643 as showing a tendency to coalesce, due to common interests and needs. Bacon's Rebellion should find its real significance in the fact that the people under the conditions about them had so grown in the spirit of freedom as to stand for their rights against English government as represented in Gov. Berkely. The same fact makes the incident of the Connecticut charter in 1687, and of Fletcher's arbitrary course in New England in 1693 very suggestive. This progress in ideas and sentiment finds fuller evidence in the attempt of England in 1753 to unite all the colonies against the French and Indians. It was easy for the colonies to unite among themselves, but the attempt only showed that they could not now unite with England. The inter-colonial wars should be presented so as to show that they bore no real relation to American concerns save as the nations involved had colonial possessions which they must guard; while on the other hand, the French and Indian war, though associated with European complications, was really the clash of conflicting interests and territorial claims in America. And here again, in discussing the claims of nations, the fact that water-sheds are recognized as natural boundaries, should be clearly brought out and applied to the French and English claims to the regions west of the Appalachians. The geography of each portion should be reviewed in course.

The text-book work in geography covers South America and Europe. The former is related to the period of discovery and explanation and hence has much in common with the earlier part of the work in history. The continent of South America, both in physical features and condition of civilization, is very simple and does not call for extended study; hence but two months are allotted to it, the remaining seven being given to Europe with its complex structures, diverse industries, varying but active civilization, and its relationship to the colonization of the new world. As those countries which influenced life in the Americas are studied, the character of the people, the government, industries, education, religion, will all help to explain like institutions as they develop in the colonies. Spain will be best seen in her American colonies; England will be more clearly revealed in her complex

civilization as reproduced in the simpler institutions in North America. This is a rich field and its cultivation will not only add value to the product in pupils but will reward the teacher in self-culture.

Denominate numbers present many difficulties to pupils. They commonly seek for some form into which they may thrust every problem and grind out the answer. They should, by all means, be led to exercise judgment in all solutions, and problems too difficult should be omitted. They should be trained to see each problem as a concrete thing, instead of an abstraction and hence they should solve many problems by actual measuring and weighing. In percentage, the knowledge they have of fractional values and processes should be carefully utilized and many problems should be solved by both methods, till they see percentage as a convenient form of fractional work. They should be taught to use the easier process in the solution of problems. Why require a child after the principle is understood, to multiply 488 by 25 to find 25 per cent. when $\frac{1}{4}$ is so easily obtained?

The language work should be used very constantly as a connective of all the other work, both for the sake of correlation and for the sake of improved work in language itself. The forms of expression must be carefully mastered for their own sake, but while doing this, pupils will gain by using these forms as means for the expression of ideas brought to their minds in other studies.

A good degree of mastery of word forms has now been acquired and greater stress may be laid upon the art of vocal expression in the reading work. The reading should now be selected with this in view. Outside the reader, much can be found which will relate to the other work and also be good reading matter for expression as well as thought. Grandfather's Chair and Sharp Eyes are suggested as being of such a character.

The science work is very definitely outlined and should be so employed as to give still further training in close observation and careful analysis. The reading of Sharp Eyes is designed to aid in this, and children should be encouraged in their rambles to note things as Burroughs did and report them in their recitation.

PRIMARY DEPARTMENT.

Edited by MRS. SARAH E. TARNEY-CAMPBELL, Supervisor of Instruction in the
Anderson Schools.

THE POPLAR TREE.

One night, just at sunset, an old man found the pot of gold which lies under the bend of the rainbow. His home was far beyond the dark forest through which he was passing. The pot of gold was heavy, and he soon began to look for a safe place in which to hide it until morning. A poplar tree stood near the path, directing its branches straight out from the trunk. That was the way poplar trees grew in those days.

"Ah," said the man, "this tree is the very place in which to conceal my treasure. These trees are all asleep, I see, and these leaves are large and thick."

He carefully placed the pot of gold in the tree and hurried home to tell of his good fortune. Very early the next morning, Iris, the rainbow messenger, missed the precious pot of gold. She hastened to Zeus and told him of the loss.

Zeus immediately sent Hermes in search of it. It was but a short time until Zeus came to the forest where it was hidden, and he awakened the trees and asked them if they had seen the pot of gold. They shook their heads sleepily and murmured something which Hermes could not understand. Then Zeus himself spoke to them. "Hold your arms high above your heads," he said, "that I may see that all are awake." Up went up the arms, but, alas, down to the ground came the pot of gold. The poplar tree was more surprised than any one else. He was a very honest tree and for a moment hung his head in grief and shame. Then again he stretched his arms high above his head and said, "Forgive me, great father, hereafter I shall stand in this way that you may know I hide nothing from the sun, my king." At first the poplar tree was much laughed at. He was often told that he looked liked an umbrella that a storm had turned inside out. But as the years went by every small poplar was taught to grow as fearless, straight and open-hearted as himself, and the whole poplar family became respected and loved for their uprightness and strength.—*Miss Cooke's Nature Myths and Stories.*

SPELLING.

In noticing the spelling work of children from the first to the fourth grade inclusive, it seems quite evident that the great majority of the words which they misspell are the words which are entirely familiar in meaning, but to which their attention has not been especially called and which they have formed the habit of spelling wrong in many cases. To, too, two are very frequently misspelled, so also are new and knew, no and know, there and their. Then such words as dirt, turn, leaves, and stalk, words which the children constantly use and which occur in their written work are, (I was about to say) usually misspelled. In looking over these written exercises, (the exercises from the lower half of the grades especially and comprising all phases of work,) I believe I am safe in saying that the misspelled words are, four out of every five, those which the children have frequently used from their earliest period of talking and which they constantly use in their common conversation.

Because of this fact, we have undertaken to make our spelling work for the lower grades include, at least for one phase of it, those common words which the children use both in their talking and writing. We have undertaken to begin with the words which are most frequently used in written work first, and to continue the spelling of such words as long as we find they misspell them. Each teacher is supposed to keep a list of the common words which her children frequently misspell, and to bring them in succeeding spelling lessons again and again until the correct form is fixed. These words are, of course, very different in form and sound. They comprise words that might be spelled according to rule and those which are 'a law unto themselves.'

The second idea in the spelling work in the lower grades, (especially in the work of the latter half of the first year and all of the second and third years) has been to group words that have some particular sound and to study these words in the groups. No special attempt is made to dwell upon each particular word, but the entire group, or as many as it is practicable to take, are studied and when sufficient time seems to have been put upon these, if there are any exceptions to this

common order of spelling and if these exceptions are such that the children need to have their attention called to them at present, they are also taken. In the group of words—tool, school, spool, fool and cool the sound $\bar{o}l$ is represented by ool. In connection with this, I do not think it is well to call their attention to such words as rule, where the sound $\bar{o}l$ is shown by ule--the u after r having the sound of long oo. The other words with the long oo had best be given fully and clearly, and no suggestion made as to any word that sounds the same, but is spelled differently. After this one ending is pretty well associated with the particular words, then it is all right to suggest other words.

The third fact that we are also trying to insist upon as a key to spelling and pronunciation is what is commonly called some of the rules of spelling. We are trying to have little people see that c and g are hard and soft when they occur before particular letters; for instance, they are both hard before a, o, u, etc., and both are usually soft before e and i. We also wish these little people to learn, if possible, before the close of their first year that the final e in most words makes the preceding a, e, i, o, or u long. The knowledge of these simple principles is a very great aid in the pronunciation of new words learned in spelling.

So it seems to me there are three ideas to be kept in view in primary spelling and these are the three which I have just given. First, that children should learn to spell the common words which they constantly use in their written work and the teacher should make a special effort in seeing that all these little words are completely mastered by every child in the school. Second, it is a great saving of energy to teach words in groups, for instance, head, dead, spread, dread and thread can all be learned by taking them in a group almost as quickly as any one can be learned alone. In the third place, the very easy and common principles of pronunciation should all be taken as quickly as the child can understand them. By learning that c before o is hard, and that there is not a single word which they never use (and which none of them will probably use for several years) beginning with the letter k before the o, the child ought to know how to begin the spelling of any new word that begins with this particular sound.

DRILL.

I enclose a copy of a part of a letter from a second and third grade teacher in which she puts very clearly this particular difficulty of how to impress points that seem absolutely essential to successful teaching so they will be well remembered, that is, so they will come to the child exactly when they are wanted, and yet not make the work full of the kind of drill that is near neighbor to drudgery.

“Of course I did not expect everything to go off as smoothly for me in the beginning as it does for experienced teachers whose work I had seen. But I had studied pedagogy and did not think teaching would seem strange to me. One of the ideas I began with was that all work presented should be new, pure drill work had no place in the schools.

I had not expected the children to remember all the details, but no matter how well I may think I teach a lesson, when I go back to it in a few days, I find very often that they have only a dim idea of what was done. In the number work I have tried to have the children work out with objects the different processes. They can do this very readily but whenever they are asked a simple combination they must have objects, or make marks to help them count it up.

I can't tell you how many new things I did teach the first few weeks of school and think of my humiliation when I found they hardly remembered anything that had been done. In the primary reading I thought it would be very monotonous if the same words were presented a second or third time, so I gave new ones. I did not then see or think that these words could be used in new stories—in fact that they should be so presented.

Sometimes I am very much discouraged. It does seem that I have taught just nothing at all. I think now the greatest difficulty has been this that I have too often taken for granted that when a point is taught it will stay taught. I understand the processes in the number work must be taught, but it seems distressing that whenever they wish to know how much four times three are, they must stop and begin to count up. Of course it would not be pedagogical but I wonder sometimes if I had taken less time on having them

work out these results and more constantly insisted upon the giving of results quickly from memory—I wonder if the real benefit to the child would not have been greater.

I have similar trouble in the spelling of both classes and in other work. What shall I do? I thought before I began teaching that exercises or recitations that did nothing but drill on things which were understood and for the purpose of fixing things in memory—I have thought this kind of work was wrong.

Can you or some one of your teachers having work similar to my own help me out of my difficulty?"

This is no unusual trouble but one which every teacher meets in actual work. All preparation for teaching ought to help the pupil to an adequate appreciation of the fact that unless there is something particularly striking either in a point itself or in the manner of its presentation the fact that something has been taught once is not sufficient guarantee that it is to 'stay taught.'

There is nearly as much ingenuity required to know how best to bring the same fact up again and again in different relations as to present it the first time.

What are you doing to meet this difficulty?

THE SCHOOL ROOM.

PUT DOWN 8 AND CARRY 1.

E. W. ALBRIGHT, FARMLAND, IND.

It has been my experience that very few school children, especially those of the lower grades, have a proper insight into the ground principles of addition and subtraction. They have been taught that when the answer in addition is 18, they should "put down 8 and carry 1." But do they clearly understand just why this is done? I think not. The same thing is true with regard to borrowing in subtraction.

I am a strong believer in the principle, "Proceed from the known to the unknown;" and I also believe that we often underestimate the amount known by the little ones. Acting upon this theory, I have a plan for teaching addition and subtraction which I have found to be very satisfactory.

We will take addition first. There are no pupils in the second or third years of school who do not know that 10 pennies make one dime and 10 dimes make a dollar.

Acting upon this basis, I have a little sum on the board and say "We will call this column, pennies: this one, dimes; and this one, dollars; pointing to units, tens, and hundreds, respectively.

Take this problem for example

\$	d.	p.
4	6	8
1	4	7
3	2	5
<hr/>		

I say, "One man gives me 4 dollars, 6 dimes and 8 pennies; another man gives me 1 dollar, 4 dimes, and 7 pennies; and another man gives me 3 dollars, 2 dimes, and 5 pennies; how much money have I?" Now we will find how many pennies I have first because they are the smallest. The class will quickly tell you that you have 20 pennies. Now what shall I do with these 20 pennies? I say it is unhandy to carry so many pennies, so we will change them to dimes and they tell me the 20 pennies make 2 dimes. Or I say I have three pockets; one for pennies, one for dimes and one for dollars. The penny pocket will hold only 9 pennies however so as I have twenty pennies I must change them to dimes making 2 dimes and no pennies left for the penny pocket so we will put zero there.

Now those 2 dimes made by the pennies are put with the other dimes, (in the mind of the pupil, not on the board) and they tell me I have 14 dimes. I have them do the same with the 14 dimes that they did with the 20 pennies, so we have four dimes for the dime pocket and one dollar put with the other dollars makes nine dollars. When we are through our problem looks like this

\$	d.	p.
4	6	8
1	4	7
3	2	5
<hr/>		
9	4	0

So I have 9 dollars, 4 dimes, and 0 pennies. After this is thoroughly understood I change the names to units, tens, and hundreds. It is a very good idea for the teacher to have

some toy money and have the children make the problems on their desks with it and when the sum is more than 9 pennies, or 9 dimes, take them to the teacher and actually change the pennies to dimes and the dimes to dollars.

The same principle holds good in subtraction. Suppose you tell them you have 6 dollars, 5 dimes, and 2 pennies and give away 2 dollars, 1 dime, and 8 pennies. Your problem goes on the board like this \$ d. p.

$$\begin{array}{r} 6 \ 5 \ 2 \\ 2 \ 1 \ 8 \\ \hline \end{array}$$

You give away the pennies first because they are the smallest, but you have only 2 pennies and want to give away 8 pennies. What will you do? You may tell them about the penny pocket, the dime pocket, and the dollar pocket as in addition; so you go to the next pocket, get a dime, change it to pennies, (making 10 pennies) put these 10 pennies with the two you already had and you then have 12. Now you can give away the 8 and will have 4 pennies left to put in a penny pocket under the problem. I don't put on the board, but let them remember the dime they changed to pennies, and that they have only 4 dimes left in the pocket, so when they give away the one dime they have but 3 dimes left, etc., etc. Then when you are done your problem is \$ d. p.

$$\begin{array}{r} 6 \ 5 \ 2 \\ 2 \ 1 \ 8 \\ \hline 4 \ 3 \ 4 \end{array}$$

or 4 dollars, 3 dimes, and 4 pennies.

The teacher can use the toy money here as easily as in addition.

This same principle can be used in multiplication and division.

OPENING EXERCISES.

BY A. C. SCAMMELL.

At no time in the day may the teacher be so magnetic as in the morning opening of school.

The first half hour is her opportunity with her pupils, and the time to forecast what the other five hours shall be

How shall the opening exercises be conducted, elicits as many varying answers, as there are types of teachers.

There are teachers who begin the day by placing before their pupils some beautiful wood-portrait. They cull the best from the lives of men and women who have been the world's blessings. They believe in the inspiration of example, and in high ideals. The staying thought of each morning's lesson is, "what others have done, I can do."

"Go where no other will go. Do the work no other will do," has given to many a school-girl the spirit of Mary Lyon.

"Turn again, Dick Whittington, Lord Mayor of London," has been heard, in effect, by many a school-boy as he has listened to some story of noble striving and gaining.

In teaching thoughtful kindness, the stories of "Black Beauty" and "Beautiful Jo" have been excellent helpers.

Many teachers give their pupils a part of the time allotted to morning exercises, in which to relate stories of humanity and moral bravery, that they have witnessed, no story of cruelty or cowardice being allowed.

The teacher may be a nature-worshipper. If she is, the children soon know it. Every morning they bring her new texts from Nature's wonder-book. They puzzle her with "the questions that only children can ask, and only God can answer." But she is making them devotees, whom she can reverently lead "from Nature up to Nature's God." When teacher and pupil stand together on the heights for a little while every morning, the Vision and the Voice linger all the day long—all the life long.

From well-conducted Nature-lessons, the children will evolve thoughts like these. "God is good. He wishes us to be happy. He makes lovely colors and sweet perfumes to please us. He makes useful things to grow for our shelter, our clothing, our food, our healing. We are dependent upon God's lower creatures. We will not despise nor harm the meanest of them. When we are older, we will travel and see for ourselves the wonderful things in nature about which we read and hear."

Is it a task, or a sweet privilege to open their understanding, that they may see with reverent eyes, and to attune the heart to hear the harmonies only?

In many schools, patriotism is the keynote of the day. The children are taught to gracefully salute the flag, as they march into the school-room to inspiring music. While standing they repeat the oath of allegiance to the flag, and sing a national hymn. Roll call is answered by a patriotic quotation from each pupil. Such exercises may be devotional, if the teacher's personality makes them so. Gradually she may develop thoughts like these.

"I am a soldier. I have inclinations and habits to overcome. To do this I can have all the help I need, my conscience, my reason, my will, and above all, the divine strength. I can and I will conquer myself. I see wrongs in the home, in the school, and in the town. I ought to help to right these, too, since I do not belong to myself, but to everybody and to every good cause that needs me. I must have right principles, and must stand by them at any cost. I must never be off duty. Loyalty to my country, means this and more."

There is the deeply religious type of teachers, to whom responsibility, duty, and their kin are grave words. They can be reduced to the child-vocabulary, so that they will be smiling, winsome words, easy to do. The writer remembers, as a week day Sabbath, one morning in a primary school. A moment of hushed silence followed roll-call, then without signal, the children rose and repeated the Bible verse, "Suffer the little children—," with a pretty accompanying movement of embrace. Again silence, and then the hymn,—

"I think when I read that sweet story of old."

As the lines—

"I wish that His hands had been placed on my head,
"That His arms had been thrown around me."

were sung, the expression of the children's faces, told that the wish was real. A simple prayer in verse, said with reverent voice, closed the children's matins. The teacher's only part, was the tender question, "Children, how many of you will try to please your kind Friend in all that you do and say to-day?"

Occasionally, there is found the teacher who has not the clear inner vision to see the opportune moments of the day.

Yesterday, there was a little shower of angry words upon

the playground. This morning, some of the children came to school from disaffected homes, without the kind good-bye, and with the memory of the impatient word or deed. Surely, the teacher should make the first moments in the school-room, rainbow moments full of hope and promise. In some way she ought to set the children's hearts to singing,—

"Every day is a new beginning,
Every hour is the world made new."

Will the morning chapter, the talk or the hymn chosen at random, and rendered without the "spirit that giveth life," soften and comfort the child-heart? If ever want of thought is want of heart, it is when the teacher offers the child a stone for bread and does not realize it. The saying that children are always hungry for food, and always eager for a gift, is doubly true in its school sense. To many a child, the school-room is his real home, and the teacher is his wiser parent. Teachers, how are we building, in these precious morning moments? When the floods of temptation, of prosperity, or of failure come to our pupils, will the house stand because we have helped to build it on the sure foundation?—*Popular Educator*.

SHORT METHOD IN CUBE ROOT.

BY HOWARD MITMAN, A. M.

Some time ago, while doing work in cube root, I discovered a method of determining the root of any cube of two periods or less. That is, any root of not more than two figures can readily be written, without going through the tedious process of extracting according to rule. For example, take the cubes 39,304 and 274,625. A glance shows the root of the first to be 34; of the second, 65.

We know the cubes of the numbers 1 to 9 are the following, in their order: 1, 8, 27, 64, 125, 216, 343, 512, 729. By arranging these numbers and their cubes in groups, and paying particular attention to the unit or last figure in each cube, we have the following:—

$1^3 = 1$	$6^3 = 216$
$4^3 = 64$	$9^3 = 729$
$5^3 = 125$	

Notice that the unit figure of the cube is always the same as the number we are cubing; so that the cube of 4 ends in 4; the cube of 6 ends in 6; and so on for the five numbers given. This holds good without exception.

Therefore, any cube whose unit figure is 1, 4, 5, 6, or 9 has 1, 4, 5, 6, or 9 as the unit figure of the root.

There are still four numbers to consider, which we may group like this:—

$$2^3 = 8$$

$$3^3 = 27$$

$$8^3 = 512$$

$$7^3 = 343$$

Here we see that the cube of 2 is 8, while the cube of 8 ends in 2; the cube of 3 ends in 7, while the cube of 7 ends in 3.

Therefore, any cube whose unit figure is 8 has 2 as the unit figure of the root; any cube whose unit figure is 2 has 8 as the unit figure of the root.

The same may be said of 7 and 3. When one is the unit figure of the cube, the other is the unit figure of the root.

Keeping these facts in mind, we can readily write the unit figure of the root of any cube. And remembering the cubes of the numbers 1 to 9, we can as easily determine the first figure of the root, and, if the cube is of only two periods, the whole root.

For example, 592,704 is a perfect cube. By inspection, the first figure of the root we see is 8; and as the cube ends in 4, its root must also, being 84. Take the cube 300,763. The first figure of the root is evidently 6; and as the cube ends in 3, its root must end in 7, making 67.

In any cube of more than two periods, we can apply this method to determine the first and last figures of the root, and use the regular rule for the intermediate figures. The cube 130,323,843 contains three periods and three figures in the root. The first and last figures of the root are 5 and 7 respectively, leaving us to determine the second figure in the regular way, which shows the root to be 507.

This method can only be used when the number we operate upon is known to be a perfect cube. It very often happens that from the nature of the work we know a certain number to be a cube whose root we must find, and in all such cases the method I have tried to explain is very convenient.—*N. E. Journal.*

DEPARTMENT OF PEDAGOGY.

Conducted by ARNOLD TOMPKINS, Chair of Pedagogy, University of Illinois, at Champaign.]

PEDAGOGICAL BOOKS AND EMERSON'S "CIRCLES."

It is usually a sign of narrowness when a man swears by any man's system of thought; whether it be in science, politics, philosophy, or pedagogy. One man and one system can present only one aspect of the whole truth. One should accept gratefully Spencer's system of philosophy, but with the understanding that he speaks from one standpoint and can present only one hemisphere of the truth. When one becomes a pronounced disciple of Hegel he is apt to become blinded to other valid aspects of the truth. In becoming strictly an adherent of Froebel or Herbart one loses the many-sided truth and many-sided interest in the problem of pedagogy. Sectarianism in thought cannot lead to the inner court of the temple of truth. To gain the greatest height and the broadest horizon one's pedagogical books and reading should be of the most diverse character.

But what I now wish to insist on is the fact that pedagogical books are not limited to those so labeled. As a rule the best books to help the teacher are not those written with that distinct purpose. And the sooner the teacher learns to read vital books from the pedagogical point of view the better. The purpose of this article is to encourage such practice. It seems that when a course of reading is made out for the teachers it is expected that something will be chosen from books directly addressed to the teacher. This may be well, but it is not the only thing, and not always the best thing, that can be done. The *New York School Journal*, in criticising the action of the Indiana Reading Circle Board in adopting certain books not labeled teachers' books seems to think it not well for teachers to browse on common territory with other people; forgetting that the Indiana teacher has the power of assimilating the common food of the mind into pedagogical bone and muscle. The teacher would be in a bad plight indeed were he prohibited from the inspiration and guidance received from non-professional books. In fact there comes a time in one's professional growth when

pedagogical books give the least pedagogical help, as compared with other books; just as the minister who keeps helpfully close to the heart and life of his people must turn from his books of theological speculation to those which spring from the inner life of the soul, and are equally good for all classes and all professions. Pedagogical books, in the strict sense, are to train us so that we may give pedagogical interpretation to all things and to all books. They belong to the preparatory school of the profession; and, while they are never to be put aside, the teacher must rise to the universal point of view where his teaching power is reinforced from all quarters; to where even the universe is given its pedagogical interpretation. Such is the inevitable growth of the thinking teacher. So true is this that the reverse is also true. When one comes to ripe knowledge in any line of study, as that of science, sociology, religion, or philosophy, he arrives at the pedagogical point of view and is inspired with a pedagogical interest. Prof. Dewey, Dean of the Department of Philosophy in Chicago University, and who is doing such great service in the interest of philosophy, claims, if I interpret him correctly, that his chief interest in philosophy is a pedagogical one. For him it is a question of life and the development of man. The sociologist's whole problem is that of adjusting the forces of society so as to bring out the full life and true character of the individual. The scientist's problem is, how to get the most and best life out of the study of nature. His problem is one of life for the individual; and in this he has the true pedagogical motive. The preacher and the teacher are both seeking the ways of salvation for the man. No system of thought or aspect of truth can be pressed to its ultimate meaning without becoming pedagogical.

In the light of this what better thing could a teacher's reading club do than to take such a book as Herbert Spencer's *First Principles* or Carlyle's *Sartor Resartus* and extract its pedagogical signification. In fact what other signification have such books? One cannot interpret Emerson's essay on "Circles" without viewing it from the teacher's standpoint; and the teacher seeking professional help can find no better source. For instance, how much might the teacher evolve

from this: "The life of man is a self evolving circle, which, from a ring imperceptibly small, rushes on all sides outward to new and larger circles, and that without end." Again, "The only sin is limitation." How helpfully inspiring and how pointed in guidance for the teacher to feel that all his complex duties and efforts are for the removal of limitation, of sin. Once more in the Essay: "Generalization is always a new influx of the divinity in the mind. Hence the thrill that attends it." When it is considered that the work of the teacher is to bring the pupil into unity with the divine mind through the phenomena of the world, he may see the significance of generalization in the study of those phenomena. Pedagogical books present the method of generalization, but here we have given the ultimate meaning of the process, the guiding and inspiring truth to the teacher always. And so at every point in this essay is the pedagogical writer outdone; and at the close of its study one may see the whole theory and practice of teaching symbolized by the circle.

George McDonald's Donald Grant has been spoken of as a pedagogical novel. This might well be said of Holland's Arthur Bonnicastle. But may not the same be said of any good novel? A novel must exhibit the development of a character,—an ideal development. Such is the process the teacher is living out with the pupil. Every poem is the teacher's text. To get at the motive in education in the close sympathy between man and the spirit of the world about him, the best thing the teacher can do is to lay aside his dreary professional treatise and turn to Wordsworth's "Intimations of Immortality."

So that a pedagogical library consists of all books the teacher can turn to pedagogical account; and these include all deep and true books on whatever phase of thought and life.

SCIENCE WORK IN THE GRADES.

Recently Dr. S. A. Forbes, Dean of the College of Science, University of Illinois, read a paper before the University High School Conference on the subject of "Science Study in the grades as a preparation for University Work." It is full

of suggestion to the general teacher, irrespective of university preparation, and while too long to insert in the Journal in full, the following portion, which gives the spirit of the discussion, may be read with great profit.

“I think we may safely say that our average elementary school, in central and southern Illinois at least, is now to all intents and purposes essentially a school of language and of mathematics, and if the work in these departments is not well done it is practically a school in the *mechanism* of language and the *processes* of mathematics. I need not say that from our point of view this is very wrong. The sensitive and curious mind of the little child should be opened towards every side on which real knowledge lies. It seems to me a pitiful and cruel thing to shut the outside door on life, and to close and blind the windows through which the light of nature streams, and then to force the boy or girl to work day after day for years on the contents of the inner closets of his own and other people's minds by the artificial light of the text-book and the routine teacher's drill. Open the inner doors of the house of the mind in due time, of course, and see also that the sky lights in the roof are free and clear, and invite the sunbeam and the cloud shine and the flower glow, and the glitter of the wave and the rustle of the leafy tree and the buzz of the bumbling beetle at the window sill into the room, and help the pathetic little weavers at their looms to weave all this carefully into the web of knowledge as it grows slowly under their clumsy but well intending fingers.

Indeed, for my own part, I believe that the whole life and teaching of the graded school should be saturated with nature study from the first day to the last; and I believe that in so treating it we should not narrow and sacrifice anything anywhere, but that, on the contrary, we should expand and vivify the work of the school throughout. Certainly we should in this way avoid that deadening of the sensibilities and darkening and narrowing of life of the child in the public school which, as I see the process going on in one after another of my young acquaintances, affects me as it would to see a cataract slowly stealing over the eyes of each,

until, since all are finally blind together, none of them can understand that they have really lost their sight.

Next, I think that this elementary teacher should take his science seriously, as of equal value and significance with anything else in his school. Certainly first hand knowledge is as valuable to us as second hand knowledge, and knowledge of the macrocosm without is as useful to us as knowledge of the microcosm within, especially since the macrocosm includes the microcosm also. And the ability to interpret and to organize and to utilize in action and in thought the products of our own observations and experience is as important to us, whoever we are and whatever we do, as is a knowledge of the way in which others have done these things with the products of their experiences.

Science should be taught in the grades because of its own utilities—not material utilities alone, I need not say, but educational utilities as well. We need not feel driven to smuggle it into the schools under cover of language work or drawing, although we should not ignore its value in connection with several of the subjects of the common school; but it should be made to walk on its own feet, and to pay its own way at every stage.

Then I think we should expect the elementary teacher to know the actual values of physical science as a teacher's tool. At present it is a common thing for two completely inconsistent ideas concerning it to be held together with no apparent consciousness of their inconsistency, one of which ideas is inadequate and the other false. The first is the idea that physical science is good for nothing but to train the powers of observation, and the other that it is an advanced subject or group of subjects properly belonging in the high school only. Still another common view makes of it a kind of desert, a recreation study, coffee and icecream, we might say—stimulating, soothing, and refreshing when taken after English soup and roast arithmetic and history pudding, but really not to be thought of as a nutritive food. No teacher who has ever done any genuine science work himself will make these ridiculous blunders. The science course which does not teach the student to do and to think as well as to see, to work out results for himself by his doing and his thinking,

to state these results in language of his own and to defend them against intelligent criticism, is not the kind of elementary science needed by us as a preparation for college, and not that needed by the student, either, as a preparation for life. That science teaching fails of its true purpose which does not habituate the student more or less fully to the scientific habit of thought and point of view; which does not train him to precision of procedure and exactness of expression; which does not tend to dispel superstition, to protect against illusion and emotional whim; and to make a deliberate self-deception difficult and repugnant, if not impossible.

And, finally I will only add a suggestion concerning the arrangement and concatenation of subjects in the elementary schools I think we are bound to protest to the best of our ability against both the helter-skelter and the topsy-turvy methods of arrangements. By the first I mean that kind of arrangement which is governed by accident or caprice or convenience merely, with no account taken of relationship of subjects, either collateral or successive, and with no attempt, consequently, to make one subject lead to another or serve another in any way. This is not an attempt on my part to roar with the thunder of the Herbartians, but it is intended merely as a recognition of the fact, unquestioned but too rarely utilized, that the separate studies of the elementary schools are not isolated units, but that they are closely related portions of an organic whole which can not be dismembered and dissected and put together again in a disjointed way without great harm to it.

By the topsy-turvy method I mean the not uncommon method of putting the conventional before the natural; the study of the symbol before the study of the thing, the word before the object; the method deliberately of postponing to the high school the simplest elements of the most elementary subjects of the common school course. I know that this topsyturvy method is not without the support of high authority, and we have a formal method of beginning the erection of the educational edifice at the root by suspending the roots to a metaphysical balloon blown up with speculative doctrines concerning self-activity, the freedom of the will,

the foundation of moral responsibility, and the like, and finishing the work by hustling in some rubbishy foundations of sham-science in the high school, as if to conceal the fact that the whole structure is really hung in the air. I do not believe that any genuine preparation for college science work will ever be offered us,—any preparation which will enable us to lift the beginning science work of the college fully up to college grade,—until there runs through the whole school system below, from the kindergarten upwards, intelligently developed and well organized, a strong line of nature study, differentiated in the high school into distinct courses in the separate natural science branches. I simply voice the common judgment of my colleagues when I say that the physical science work now offered us from the smaller high schools as a preparation for the University is not infrequently of so low an average grade that it is not advisable for us to assume that students who present it for entrance know anything of it which it is worth while for us to take into account in forming our own beginning courses.”

FOR MORNING EXERCISES.

1.—THOU SHALT NOT BEAR FALSE WITNESS AGAINST THY NEIGHBOR.

A lady visited Sir Philip Neri on one occasion, accusing herself of being a slanderer.

“Do you frequently fall into this fault?” he asked.

“Yes, very often,” replied the penitent.

“My dear child,” said Philip, “your fault is great, but the mercy of God is greater. I now bid thee do as follows: Go to the nearest market and purchase a chicken just killed and covered with feathers. Then walk to a certain distance, plucking the bird as you go. Your walk finished, return to me.”

The woman did as directed, and returned, anxious to know the meaning of so singular an injunction.

“You have been very faithful to the first part of my orders,” said Philip. “Now do the second part, and you will be cured: Retrace your steps, pass through all the places you have traversed, and gather up one by one all the feathers you have scattered.”

“But,” said the woman, “I cast the feathers carelessly away, and the wind carried them in all directions.”

“Well, my child,” replied Philip, “so it is with your words of slander. Like the feathers which the wind has scattered, they have

been wafted in many directions. Call them back now, if you can. Go, sin no more."—*The Quiver*.

2.—CONTENTMENT IS MORE TO BE DESIRED THAN GREAT RICHES.

Once in New England says a writer in the Outlook, I was riding with an old farmer, and some of the men of the neighborhood came under criticism. Speaking of a prominent man in the village I asked:

"He is a man of means?"

"Well sir," the farmer" replied, "he ain't got much money, but he's mighty rich."

"He has a great deal of land then?" I asked.

"No, sir, he ain't got much land, neither, but still he's mighty rich."

The old farmer, with a pleased smile observed my puzzled look for a moment and then said:

"You see, he ain't got much money, and he ain't got much land, but still he is rich, because he never went to bed owing any man a cent in all his life. He lives as well as he wants to live, and he pays as he goes; he doesn't owe anything and he ain't afraid of anybody; he tells every man the truth, and does his duty by himself, his family and his neighbors, his word is as good as a bond, and every man, woman and child in the town looks up to him and respects him. No, sir he ain't got much money and he ain't got much land, but still he is a mighty rich man, because he's got all he needs and all he wants."

I assented to the old farmer's deductions, for I thought them entirely correct. When a man has all he needs and all he wants he is certainly rich, and when he lacks these things he is certainly poor.

3.—"I CANNOT TELL A LIE."

Bert and John Lee were delighted when their little Scotch cousin come to live with them. He was little, but very bright and full of fun. He could tell some curious things about his home in Scotland and his voyage across the ocean. He was as far advanced in his studies as they were, and the first day he went to school they thought him remarkably good. He wasted no time in play when he should have been studying, and he advanced finely.

Before the close of school the teacher called the roll, and the boys began to answer "ten." When Willie understood that he was to say "ten" if he had not whispered during the day, he replied, "I have whispered." "More than once?" asked the teacher. "Yes, sir," answered Willie. "As many as ten times?" "Yes, sir." "Then I shall mark you zero," said the teacher sternly, and that is a great disgrace."

"Why, I did not see you whisper once," said John, after school. "Well, I did," said Willie. "I saw others doing it, and so I asked to borrow a book, and then I asked a boy for a slate pencil, another for a knife, and I did several other things. I supposed it was allowed." "Oh, we all do it" said Bert, reddening. "There isn't any sense in the old rule, and nobody can keep it; nobody does." "I will, or else I will say I haven't," said Willie. "Do you suppose I will tell ten lies in one

heap?" "Oh, we don't call them lies," said John. "There wouldn't be a credit among us if we were so strict." "What of that, if you tell the truth," said Willie, bravely

In a short time the boys all saw how it was with Willie. He studied hard, played with all his might at playtime, but according to his reports he lost more credits than any one else. After some weeks, the boys answered "nine" and "eight" oftener than they used to; and yet the schoolroom seemed to have grown quieter. Sometimes, when Willie Grant's mark was even lower than usual, the teacher would smile peculiarly, but he said no more of disgrace. Willie never preached at them, nor told tales; but somehow it made the boys ashamed of themselves to see that this sturdy, blue-eyed Scotch boy must tell the truth. It was putting the clean cloth by the half-soiled one, you see; and they felt like cheats and story-tellers. They talked him over and loved him, if they did nickname him "Scotch Granite," he was so firm about a promise.

At the end of the term Willie's name was very low down in the credit list. When it was read he had hard work not to cry; for he was very sensitive, and had tried hard to be perfect. But the very last thing that closing day was a speech by the teacher, who told of once seeing a man muffled up in a cloak. He was passing without a look, when he was told that the man was Gen. —, the great hero. "The signs of his rank were hidden, but the hero was there," said the teacher. "And now, boys, you will see what I mean when I give a present to the most faithful boy in school, the one who really stands highest in deportment. Who shall have it?"

"Little Scotch Granite!" shouted forty boys at once; for the boy who was so low on the credit list had made truth noble in their eyes. —*British Evangelist.*

4.—BETTER WHISTLE THAN WHINE.

As I was taking a walk, I noticed two little boys on their way to school. The smaller one stumbled and fell, and, though not much hurt, he began to whine in a babyish way—not a regular roaring boy-cry, as though he were half killed, but a little cross whine.

The older boy took his hand in a kind, fatherly way, and said: "Oh, never mind, Jimmy; don't whine; it is a great deal better to whistle." And he began in the merriest way a cheerful boy-whistle.

Jimmy tried to join the whistle. "I can't whistle as nice as you, Charlie," said he, "my lips won't pucker up good."

"Oh, that is because you have not got all the whine out yet," said Charlie. "But you try a minute, and the whistle will drive the whine away."

So he did, and the last I saw or heard of the little fellows they were whistling away as earnestly as though that was the chief end of life. —*Early Dew.*

5.—DARE TO DO RIGHT; DARE TO BE TRUE.

Such a neat trim well-cared-for boy as Charlie was, when he started for school for the first time one bright April morning. Mamma stood

by the gate looking after him as he trudged off with a smile on his lips.

If Charlie's little jacket had been buttoned all the way down I am sure some of the buttons would have popped off, he swelled so visibly with pride when he stood up in a class to recite with the other boys. He did not forget his mother's admonition to be good and not whisper or play and at night he had the pleasure of hearing the teacher tell him he had been a very good boy. Some of the older boys thought it would be great sport to tease the little fellow so they hastened to overtake him on his way home.

There was a broad ditch at one side of the road, and one of the boys, putting his hand on Charlie's shoulder, said, "What's your hurry, youngster? Wait and have a bit of fun with us."

Charlie was flattered at being asked to stop and play with the older boys, so he stopped willingly enough. Jack Townsend proposed that they should jump the ditch. It was easy for the large boys, but Charlie was sure he could not do it, and was not willing to make the attempt.

"Why, what a little coward you are!" said Jack jeeringly. "You had better go to a girl's school for you are n't more than half a boy."

Charlie's face flushed. He had been so lately emancipated from kilt skirts that he was very sensitive to the imputation of being a girl. His round face grew redder, and, when the other boys laughed and told him he did not *dare* try to jump the ditch he could not bear it. Throwing down his book, he ran toward the ditch and tried to jump it. The short, fat legs quivered in the air a moment, and then Charlie went plump into the black mire, sinking over his knees in spite of his efforts to free himself. The boys helped him out, but he was in a woeful plight. One shoe was lost, the neat suit was bedraggled with mud up to his jacket, and sadly and tearfully he crept homeward.

When he was all clean again and had told his mother all the story she said;

"It was because you were a coward then."

"Why, mamma!" and Charlie looked amazed.

"Yes, dear, you were not brave enough to stand a 'dare' and so you yielded. One of the first lessons to learn in school and in the world is to say 'No' bravely and until you have learned that lesson you will always be a coward. Remember the ditch when you are tempted to yield to some taunt and it will help you to be brave."—*Young Peoples' Weekly*.

EDITORIAL.

THE *Medical News* says: "From the records of the Senior class of Yale College during the past eight years, the non-smokers have proved to have decidedly gained over the smokers in height, weight and lung capacity. All candidates for the crews and other athletic sports were non-smokers. The non-smokers were 20 per cent. taller than the smokers, 25 per cent. heavier, and had 62 per cent. more lung capacity. In the graduating class of Amherst College of the present year, those not using tobacco have in weight gained 24 per cent. over those using tobacco, in height 37 per cent., in chest girth 42 per cent., while they have a greater average lung capacity by 8.36 cubic inches." Comment is not necessary.

SHORT SCHOOL TERMS.—In a large number of the counties of the state the school terms have been shorter the past year than for many preceding years. This arose from the fact that the state levy had been reduced and the advance in the valuation of property was not sufficient to offset the difference, as was predicted. State Superintendent Vories never made a greater blunder than when he recommended to the legislature the cutting down of the state levy. The cut from 16 cts. to 11 cts. is serious and if the schools are to be kept to their former length the local levy will have to be increased.

"THE POLITICIAN AND THE PUBLIC SCHOOL."

The June *Atlantic* contains a third paper in the series on The Case of the Public Schools. It is entitled the Politician and the Public School, and is written by Mr. L. H. Jones, superintendent of schools, Cleveland, Ohio. Mr. Jones uses as the basis of his paper information received from over 1600 teachers and superintendents in all parts of the nation. This article is a striking presentation of the evils due to political influences in public-school matters. He cites the schools of Indianapolis and Cleveland as examples of the benefits of freedom from these influences. Mr. Jones writes with great earnestness, and speaking as he does from a long and varied experience in the public schools, his judgment should have great weight.

THE ILLINOIS PENSION LAW.

The Illinois legislature, at its last session, passed a special pension law for the benefit of the teachers in all cities having a population of 100,000 or more. The fund from which the pensions are to be paid is provided for by deducting 1 per cent. per annum from the salary of each teacher. Donations, gifts, legacies, bequests will be received, but it is provided that no taxes shall ever be levied to swell the fund. The board of education is granted the power to retire any teacher who has served 20 years, on half salary, to be paid monthly. It is provided that no annuity, shall exceed \$600 a year. Three-fifths of the period of service must have been within the limits of the municipality where the board granting the pension has jurisdiction.

A very important provision of the law is that no teacher shall be removed or discharged *except for cause, upon written charges*, which shall be investigated and determined by the board of education. To any teacher who is willing to serve, but who is discharged or not re-employed, all the money such teacher paid into the fund must be paid back at once to such teacher, with interest.

About 3,500 of the 4,000 teachers employed in the Chicago schools have petitioned the board of education to make the law operative at once.—*Western School Journal*.

NATIONAL EDUCATIONAL ASSOCIATION.

Remember that the N. E. A. proper opens in Buffalo, July 7. The National Council meets July 3.

All railroads will sell round trip tickets for a single fare, plus \$2, which goes to the Association as an annual fee. Tickets can be extended and made good returning till September 1. People living east of Buffalo do not fare so well. They get the single rate price, but tickets can be extended only to July 31.

See the railroad advertisements in this issue of the JOURNAL for other particulars.

The delegation from Indiana should be large. The attractions are certainly great outside the programs which are good. The JOURNAL can not make room for the Section programs, but the following is the program for the General Sessions:

TUESDAY, JULY 7, 2 P. M.

Addresses of Welcome and Responses.

Address—Horace Mann. By Dr. W. T. Harris, United States Commissioner of Education.

Ten-Minute Speeches. By Henry Sabin, State Superintendent Public Instruction, Iowa; N. C. Schaffer, State Superintendent Public Instruction, Pennsylvania; Supt. F. Louis Soldan, St. Louis, Mo.; Supt. Aaron Gove, Denver, Colo.; Prof. D. L. Kiehle, University of Minnesota; Supt. J. M. Greenwood, Kansas City, Mo.; Editor A. E. Winship, Boston, Mass.; Col. F. W. Parker, Chicago Normal School.

WEDNESDAY, JULY 8, 9:45 A. M.

LITERATURE.—1. American Literature. By Prof. Brander Matthews, Columbia University.

2. Address. Prof. W. P. Trent, University of the South.

3. Literature in Elementary Schools. By Mrs. Ella F. Young, Assistant Superintendent, Chicago, Ill.

4. Discussion. To be opened by ten-minute speeches by Prof. J. C. Freeland, University of Wisconsin; Prin. E. O. Lyte, State Normal School, Millersville, Penn.; Pres. Nathaniel Butler, Colby College.

THURSDAY, JULY 9, 9:45 A. M.

THE FUNCTION OF NATURE STUDY IN EDUCATION.—1. Culture of the Moral Powers. By Pres. David S. Jordan, Leland Stanford University.

2. Culture of Intellectual Powers. By Prof. J. M. Coulter, University of Chicago.

3. The Function of Nature in Elementary Education. By Pres. M. G. Brumbaugh, Juniata College.

4. Discussion. To be opened by ten-minute speeches by Pres. L. D. Harvey, State Normal School, Milwaukee, Wis.; Prof. J. N. Wilkinson, State Normal School, Emporia, Kas.; Mrs. Eva D. Kellogg, Editor of *Primary Education*, Chicago, Ill.

FRIDAY, JULY 10, 9:45 A. M.

SOCIOLOGY.—1. The Relation of Sociology to Education. By Prof. Albert Small, University of Chicago.

2. The Pupil as a Social Factor. By Prof. Earl Barnes, Leland Stanford University.

The Teacher as a Social Factor. By Pres. James H. Canfield, Ohio State University.

Discussion. To be opened by J. H. Harper, Inspector of Superior Schools, Quebec, Canada.

Evening addresses will be made by Bishop Vincent, Pres. A. S. Draper, Dr. Nicholas Murray Butler, Bishop Spalding, Booker T. Washington, and Steward Woodford.

SCHOOL ENUMERATION—IT FELL OFF 64,603.

The Superintendent of Public Instruction has finished the computation of the school enumeration of the State recently taken. This year's figures show a falling off of 64,603 from the enumeration of 1895, a decrease of 8 per cent. This arises through the operation of the stringent law passed by the last Legislature designed to prevent the padding of the returns, which has been quite a common practice, due to the fact that the proportion of funds they are able to draw from the State school fund is based upon the enumeration. The greatest falling off has been in cities. The total enumeration this year shows 734,474 school children in the State this year, as compared with 799,077 last year. The enumeration and comparison by counties is as follows:

Counties.	1895.	1896.	Inc.	Dec.	Per Ct. Dec.
Adams.	7,661	7,511	....	150	.02
Allen	26,142	26,488	....	2,654	.10
Bartholomew	8,405	7,678	....	727	.086
Benton	4,234	4,037	....	197	.04
Blackford	4,773	4,975	202	....	....
Boone	9,038	8,043	....	985	.10
Brown	3,650	3,474	....	176	.05
Carroll	6,519	6,246	....	273	.04
Cass	11,931	10,398	....	1,533	.13
Clark	10,490	9,409	....	1,081	.10
Clay	12,650	11,511	....	1,139	.09
Clinton	9,188	8,409	....	779	.08
Crawford	5,499	5,074	....	425	.08
Daviess	10,820	9,997	....	823	.08
Dearborn	7,563	7,224	....	339	.04
Decatur	6,517	5,921	....	596	.09
DeKalb	7,112	6,833	....	279	.04
Delaware	12,053	12,361	308	....	....
Dubois	7,467	7,279	....	188	.02

Elkhart.....	13,193	12,233	....	960	.07
Fayette.....	3,940	3,530	....	410	.10
Floyd.....	10,727	8,495	....	2,232	.20
Fountain.....	6,891	6,215	....	676	.09
Franklin.....	5,863	5,564	....	299	.05
Fulton.....	5,666	5,508	....	158	.02
Gibson.....	9,376	9,220	....	156	.015
Grant.....	13,499	13,398	....	101	.008
Greene.....	9,239	8,844	....	395	.04
Hamilton.....	9,506	8,968	....	538	.05
Hancock.....	6,353	5,947	....	406	.06
Harrison.....	7,581	7,178	....	403	.06
Hendricks.....	7,034	6,358	....	676	.09
Henry.....	7,582	7,356	....	226	.03
Howard.....	9,147	8,560	....	587	.06
Huntington.....	9 031	8,710	....	321	.03
Jackson.....	8,958	8,191	....	767	.085
Jasper.....	4,355	4,560	205	....	....
Jay.....	8,532	8,699	167	....	....
Jefferson.....	8,701	7,417	....	1,284	.15
Jennings.....	5,849	5,175	....	674	.11
Johnson.....	6,170	5,743	....	427	.07
Knox.....	11,051	10,232	....	819	.07
Kosciusko.....	9,157	8,746	....	411	.04
Lagrange.....	5,034	4,800	....	234	.046
Lake.....	9,380	9,657	277	....	....
LaPorte.....	14,253	11,974	....	2,279	.16
Lawrence.....	6,975	6,721	....	254	.036
Madison.....	17,958	17,919	....	39	.02
Marion.....	51,271	42,272	....	8,999	.17
Marshall.....	8,481	8,203	....	278	.03
Martin.....	5,257	4,919	....	338	.064
Miami.....	9,725	8,266	....	1,459	.15
Monroe.....	6,564	6,270	....	294	.045
Montgomery.....	9,582	8,426	....	1,156	.12
Morgan.....	6,314	5,880	....	425	.067
Newton.....	3,172	3,109	....	63	.02
Noble.....	6,788	6,680	....	108	.016
Ohio.....	1,609	1,522	....	87	.05
Orange.....	5,384	5,392	8	....	....
Owen.....	5,310	4,951	....	359	.067
Parke.....	6,793	6,276	....	517	.076
Perry.....	7,095	6,454	....	641	.09
Pike.....	6,847	6,711	....	136	.02
Porter.....	6,598	5,872	....	726	.11
Posey.....	9,170	7,043	....	2,127	.23
Pulaski.....	4,913	4,624	....	289	.06
Putnam.....	7,363	6,608	....	755	.102

Randolph	8,985	8,540	....	445	.04
Ripley	7,096	6,568	....	528	.074
Rush	5,618	5,195	....	423	.07
Scott	3,219	3,078	....	141	.04
Shelby	8,713	7,954	....	759	.01
Spencer	8,547	7,432	....	1,115	.13
Starke	3,419	3,314	....	105	.03
St. Joseph	15,345	14,798	....	547	.04
Steuben	4,690	4,375	....	315	.07
Sullivan	8,030	7,789	....	241	.03
Switzerland	4,134	3,767	....	367	.08
Tippecanoe	14,219	11,492	....	2,717	.19
Tipton	7,250	6,151	....	99	.01
Union	1,854	1,759	....	95	.05
Vanderburg	21,393	20,764	....	629	.03
Vermillion	4,806	4,507	....	299	.06
Vigo	21,687	16,221	....	5,466	.25
Wabash	9,967	8,593	....	1,374	.13
Warren	3 452	8,334	....	118	.03
Warrick	8,169	7,709	....	460	.05
Washington	6,690	6,430	....	260	.04
Wayne	11,694	10,741	....	953	.08
Wells	7,589	7,435	....	154	.02
White	5,780	5,733	....	47	.01
Whitley	5,792	5,592	....	270	.05
Totals	799,077	734,474	1,167	64,603	.08

The following counties have an increase of 1896 over 1895; Blackford, .04; Delaware, .02; Jasper, .05; Jay, .02; Lake, .03; Orange, $0\frac{1}{2}$.

The Superintendent has prepared the following table of comparison by cities, which shows where some of the heavy decreases come in:

Cities.	School Enumeration		Inc.	Dec.
	for 1895,	for 1896.		
Alexandria	1,296	1,396	100	....
Anderson	5,037	5,104	67	...
Attica	838	619	...	219
Auburn	809	763	...	46
Aurora	1,224	1,192	...	32
Bedford	1,245	1,230	...	15
Bloomington	1,762	1,577	...	4
Bluffton	1,314	1,262	...	52
Brazil	2,563	2,375	...	188
Cambridge City	528	459	...	69
Clinton	628	624	...	44
Columbia City	879	842	...	37
Columbus	2,909	2,242	...	667
Connersville	1,859	1,582	...	277
Crawfordsville	2,423	1,891	...	532

Crown Point	737	687	...	50
Danville.	615	582	...	33
Decatur.....	1,283	1,243	...	40
Delphi.....	756	703	...	53
Edinburg.....	549	492	...	57
Elkhart	3,754	3,583	..	171
Elwood	2,527	2,764	237	....
Evansville	16,985	16,276	...	709
Fort Wayne.	14,796	12,631	..	2,165
Frankfort.	2,284	1,936	..	348
Franklin.	1,315	1,146	..	169
Goshen ..	2,081	2,021	..	60
Greencastle.....	1,582	1,283	...	299
Greenfield	1,561	1,294	...	267
Greensburg	1,519	1,347	...	172
Hammond	2,763	3,194	432	....
Hartford City	1,687	1,769	82	....
Huntington.....	2,990	2,741	.	249
Indianapolis	39,857	31,486	..	8,373
Jeffersonville	3,537	3,035	...	502.
Kokomo.	3,126	2,958	..	168
Lafayette	7,067	5,439	..	1,628
Lawrenceburg	1,599	1,359	..	240
LaPorte ..	4,042	2,519	..	1,523
Lagrange.	550	541		9
Lebanon ..	1,599	1,341	..	208
Liberty..	441	416	..	27
Logansport ..	6,374	5,087	...	1,287
Madison ..	3,762	2,781	.	881
Marion.	4,510	4,418	..	92
Martinsville ..	1,000	996	..	4
Michigan City ..	4,818	4,168	...	650
Mishawaka....	1,184	1,132	...	52
Monticello	589	599	10	....
Mount Vernon ..	2,505	1,526	...	979
Muncie ..	4,744	5,075	321	....
New Albany ..	7,627	5,808	..	1,819
New Castle ..	836	894	58	....
Noblesville ..	1,382	1,365	.	17
Perru ..	3,412	2,438		984
Plymouth	1,205	1,154	.	51
Portland... ..	1,350	1,346		4
Princeton....	1,508	1,420	..	88
Rensselaer ..	683	679	..	4
Richmond..	5,799	5,116	...	683
Rochester.	1,104	1,091	...	13
Rockport.....	857	776	..	81
Rushville ...	1,091	1,191	100	....

Seymour.....	1,797	1,830	33	....
Shelbyville	2,327	1,997	...	330
South Bend....	8,663	8,600	...	63
Sullivan	903	844	...	59
Terre Haute.....	13,935	9,466	...	4,469
Tipton.....	1,177	1,093	...	84
Valparaiso.....	2,296	1,578	...	718
Vincennes	3,550	2,980	...	570
Wabash.....	2,150	2,262	112	....
Warsaw	1,180	1,073	...	107
Washington	2,829	2,397	...	432
Winchester	998	970	...	28

That there has been an actual increase in the number of children in the state and in almost every county, no one will deny. The trouble is that heretofore more children have been reported than have really existed. And this should not be charged to the dishonesty of the school boards. The trouble has been largely with the system. In taking the enumeration in cities, it has been customary for a board to let the taking to the lowest bidder and the one that would agree to take the names for the least amount *per capita*, got the contract.

Of course this change in the enumeration does not affect the amount of money to be distributed and if the falling off had been proportionate there would have been no change in the amount each locality would receive, but as it is some places will lose heavily and others will make proportionate gain.

QUESTIONS AND ANSWERS.

STATE BOARD QUESTIONS USED IN APRIL.

PHYSIOLOGY.—1. Describe the sympathetic system.

2. What are the relative merits of ball and socket and hinge joints?

3. What are the functions of the different parts of the eye?

4. Describe the kidneys and state their function.

5. What is a flexor muscle? Give an example.

6. Tell where and how the blood is aerated and in what parts of the blood a change is produced by aeration?

7. Describe the various protective tissues in man.

8. Describe the structure, function and location of ciliated cells.

9. What is a gland? (Any five.)

GEOGRAPHY.—1. What causes the great gulf stream? Describe fully.

2. What is the great importance of man to the immense inland plains of the world?

3. What geographical reasons exist why the Pacific commerce of the United States may eventually be its greatest and most important?

4. Why are the Gulf States generally so fitted for the raising of cotton, and Florida so unfit?

5. The ocean south of Cape Cod is filled with the celebrated blue-fish, while that just north of it has none. Why is this so?

6. What reasons exist why so few large cities are built at the mouths of large rivers?

7. "Geography, rightly taught, will cease to be a lifeless aggregation of unorganized facts, and will deal with the earth as a true organization—a world capable of development, carrying within its bosom the seeds of the future to germinate and unfold age after age."—*Ritter*. Discuss the above statement. (*Any six, not omitting last?*)

"SCIENTIFIC TEMPERANCE."—1. How does the constant use of alcohol affect the muscular system? What connection may this have with obesity?

2. Why do the trainers of athletes and prize-fighters absolutely forbid the use of alcoholic drinks by their pupils?

3. If alcohol is a stimulant, why is its use not often of great benefit to a tired-out man?

4. What two important organs of digestion are strongly and deleteriously affected by the constant use of alcohol? How?

5. How much truth is there in the old adage, "In vino veritas?" How do you account for this?

6. If the use of alcohol in the early stages produces mental brilliancy, as the lives of so many show, how does it finally result in such destruction of the mental powers? (*Any five.*)

GRAMMAR.—1. Define a clause. Define a principal clause. Define a subordinate clause. Illustrate each.

2. Is a sentence containing a clause as subject a complex sentence? Give reasons for your answer.

3. What is meant by a logical definition? Illustrate and explain?

4. Compare and contrast synopsis and conjugation.

5. Tell the use of the infinitives in the following sentences:

1. I believe it to be a difficult task to teach the mind to think.

2. Grouchy was to come.

3. The teacher said to think to seem to be to act.

6. Write a sentence in which the idea expressed by the simple subject is enlarged by three attributes; one in which the predicate is enlarged by two.

READING.—1. When he first enters school the average six-year-old presents what native and what acquired abilities as a basis for the primary teacher to work upon in her efforts to teach him to read?

2. Describe briefly four plans for teaching such a child to read and state which you regard as the one most to be preferred. Give reasons for your answer.

3. State rather fully, illustrating as you go, what course you would pursue during the first four weeks of your endeavor to make a reader of him.

4. To how many of the punctuation points would you call the attention of pupils of this grade? For what purpose?

5. "The first third of the first year should be devoted to the building of a vocabulary of words considered under the following points: (1) The association of the written or printed words with the idea for which it stands. (2) Analysis of the written or printed word into its sounds. (3) Analysis of the written or printed word with its symbols standing for the separate sounds of the spoken word.—"State Course of Study. Discuss the above statements.

SCIENCE OF EDUCATION.—1. Explain clearly what Herbart means by concentration in education.

2. What would a proper regard for the principle of concentration according to Herbart, require a teacher to do in teaching United States History, for example?

3. Show that the child's mind is the main center in all effort to bind knowledge into unity.

4. What is meant by having harmony between the school and home life of a child?

5. What is it to *organize* one's knowledge of a subject?

6. Does the principle of concentration extend to the relations existing among the different subjects in the course? Justify your answer.

7. What is meant by the association of ideas? (Any five.)

HENRY VIII.—1. Give your estimate of the rhetorical and literary qualities of Henry VIII.

2. Do you think the drama is well organized? Give reasons for your answer.

3. What in your opinion, is the main theme of this drama?

4. Does the drama incidentally or otherwise teach any great ethical truths? If so, what?

5. Compare Henry VIII with any other historical drama written by Shakespeare. (Any three.)

HISTORY.—1. How has the manufacture of bicycles affected the price, production and distribution of horses and vehicles?

2. Give an account of the struggle between President Jackson and the U. S. bank. Has our later experience tended to justify the judgment of Jackson concerning national banks.

3. What was the so-called "Sherman Bill" relating to the purchase and coinage of silver? Narrate the circumstances of its repeal.

4. Enumerate the commercial panics in the history of the United States. How far have these panics had similar causes and conditions? How far dissimilar ones?

5. What was the policy advocated by the Whigs in the campaign of 1840?

6. "The study of Lief the Fortunate, Columbus, King Philip, Roger Williams and William Penn in the light of the institutions they represent."—State Course of Study.

Show how the above can be used as a basis for history work.

(Any four, not omitting 6)

ARITHMETIC —1. Express by means of signs, twelve plus three minus eight, multiplied by eighteen minus two, and this product divided by thirteen minus five. (No operations are to be performed.)

2. Give the necessary steps in the solution of a problem in which the interest, the time and the amount are given, to find the rate.

3. Give five underlying principles of Division.

4. Write in figures, and find difference between sums of the first two and last three:

Ten hundred ten *thousandths*.

Ten and ten *hundred thousandths*:

Ten hundred ten and ten *thousandths*.

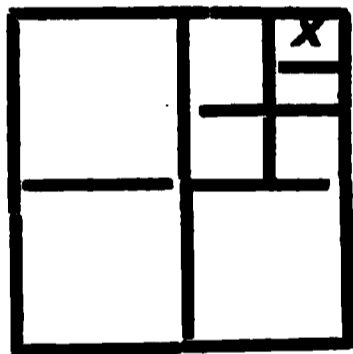
Ten hundred ten and ten *ten thousandths*.

Ten hundred *ten thousandths*.

5. What is the difference between the simple interest of \$1,000.00 at 6 per cent. for five years, and the true discount of the same sum for the same time at the same rate? Which is greater and how much?

6. Define a proper fraction; an improper fraction. State wherein there is no ground for this classification.

7. A merchant, in buying queensware, was allowed 10 per cent. off and 10 per cent. for breakage. To make a sale it was necessary for him to sell at list price; what was his gain per cent?



8. John Jones bought the part represented by X for \$1,000. How much did it cost him per acre? Write a description for deed for the land, supposing this to be section 12, township 1 east, range 4 west.

ANSWERS TO PRECEDING QUESTIONS.

PHYSIOLOGY.—1. See any good text-book.

2. A ball-and-socket joint permits movement in almost any plane; it allows the arms and legs to be rotated so as to describe a cone around an imaginary axis, a movement termed *circuminduction*. When the socket is shallow, like the glenoid cavity of the shoulder, there is great freedom of motion, but the bones are easily dislocated. When the socket is deep like the acetabulum of the pelvis, there is not so much freedom of motion, but there is less chance of dislocation.

The hinge joints permit only two motions—a backward and a forward motion in one plane.

A hinge joint permits *flexion* and *extension*.

A ball-and-socket joint permits *flexion*, *extension*, *abduction*, *adduction*, and *circumduction*.

3. The *scelerotica* (a) protects the delicate parts of the eye; (b) gives form to the eye by its firmness; (c) and serves for the attachment of the ocular muscles.

The *choroidea* (a) absorbs the rays of light not necessary for vision;

(b) and serves to contain the minute blood vessels concerned in the nutrition of the parts.

The *iris* accommodates the eye to an average amount of light by contracting or dilating the pupil according as there is more or less light.

The *cornea*, *aqueous humor*, *crystalline lens*, *vitreous humor* serve to refract the rays of light, bringing them to a focus on the retina.

The *retina* (a) receives the refracted rays of light passing through the pupil and thus catches on its surface the images (inverted) of external objects; (b) and gives the impression of sight to the *optic nerve*, which transmits the impression to the brain, and we are conscious of sight.

4. (See text-book pages 203, 204, 205.) The kidneys are the chief organs for the excretion of nitrogen. "Their function is to eliminate certain substances produced by the activity of other tissues. The waste inorganic and organic salts existing in the blood in solution are filtered from the blood entering by the renal artery."

5. Muscles that bend the joints are called *flexors*, for example, those on the front of the arm, that bend the forearm; and on the back of the thigh, that bend the leg. The *biceps* is an example. (See text-book, page 74.)

6. The blood is aerated in the lungs by being brought into close relation with the oxygen of the air. (See text-book, page 163.) Aeration produces a change in the red corpuscles, by the *haemoglobin* in them absorbing oxygen and forming a bright scarlet compound called *oxyhaemoglobin*.

7. The hair, the epidermis, and in some places the bones and muscles.

8. (See text-book, page 164). Ciliated cells are found chiefly on the surface of the air-passages; they are of the cylindrical variety, the free and expanded extremities of which are finished with very fine pliant microscopic vibratile processes termed *cilia*. These work together and as a result, the fluids resting upon their surfaces move in definite currents. The ciliary motion is probably due to changes going on in the protoplasm of the cell body. The *cilia* found in the air passages assist in respiratory changes, causing movements in the smaller air-passages of the lungs.

9. (See text-book, page 132; and dictionary).

GEOGRAPHY.—1. The remote cause is the power of the trade winds. These drive the equatorial current westward, an offshoot of which enters the Caribbean Sea and makes its way among the islands and shoals until it goes through Yucatan Passage, and enters the Gulf of Mexico, in consequence of which an equal amount of water is forced out of the Gulf through the Strait of Florida. The current does not make the circuit of the Gulf.

2. From their fertile soil and well-watered surface they are the chief nurseries of animal and vegetable life, the chief seats of population, and the great theatres of industry and civilization. In early times they

were the pasture lands of the roving tribes; since then the busy plow of the husbandman has made them the rich granaries of the globe.

3. Japan, China, and other Asiatic countries are taking on a broader and more active civilization, which will demand modern conveniences and luxuries. This will necessitate the building up of an extensive commerce with our Pacific coast, which possesses, as favorable to this desirable consummation, extensive lumber regions, rich mines, vast fertile valleys and a climate unsurpassed in the world for fruits both tropical and temperate.

4. The northern tier of counties of Florida, at present, produce most of the cotton of that state. Much of the remainder of the state is yet unreclaimed from swamps and forests. Some of it that has been drained and opened up is capable of producing the celebrated sea-island cotton.

5. The blue fish does not inhabit cold waters. Cape Cod peninsula separates waters that differ very much in temperature (why?).

6. On account of the absence of good harbors and deep water. These might be present and yet no large city arise, on account of other influences, such as an uncongenial climate, a sterile soil, or a location outside the main tracks of commerce.

7. Geography is not usually taught as is here set forth. The dry questions and dryer answers embodying unrelated facts constitute the material for the usual method of teaching. In dealing with the earth as an organization, we are enabled to follow a line of thought and investigation embodying a series of closely related and dependent ideas or principles together constituting knowledge of special value, because of its unity and application.

SCIENTIFIC TEMPERANCE.—1. Alcohol by its paralyzing effect on the nerves, depresses the vital functions, and those of elimination among the rest. The use of alcoholic liquors causes a considerable diminution in the amount of carbonic acid given out. The unburned carbon oozing lazily in the blood deposits itself in the form of fat when it can; and thus obesity is often an example of arrested metamorphosis.

2. Because it is the experience in every part of the world that the use of alcohol depresses the vital functions and robs the system of strength, and under no condition does it ever add permanent power of either muscle or mind.

3. The stimulation is only for a brief period and is at the expense of the natural strength of the system; for it is caused by an increased rapidity of the circulation of the blood, and when reaction follows, the system has lost in strength very considerably. There being no nutrition in alcohol, it cannot add any strength to the tissues.

4. The *stomach*, by producing inflammation, ulceration, cancer, etc.; the *liver*, by producing hypertrophy, cirrhosis, cancer, etc.

5. For some reason, men under the influence of alcohol are not cautious and reserved in their speech. Generally, the acting out of these attributes requires the full strength of the mind's faculties.

Let this strength or acuteness be depressed or deadened by the use of alcohol, and the tongue wags freely, and often many secrets are divulged.

6. We do not believe that "the use of alcohol in the early stages produces mental brilliancy, as the lives of so many show." For a few moments, the quickened circulation could possibly give rise to "brilliances and piquancies;" "but these are at best signs of distress, and soon subside. Whoever wants, by a short and easy method, to divest his thinking of all clearness and balance, let him apply the bottle. We are not forgetful of what is said of Byron and of old Æschylus on this head, but even here we desire proof."

GRAMMAR.—1. (See the text-book.)

2. Authors call such a sentence a complex sentence, because there are two clauses, one of them aiding in the make-up of the other.

3. Logically (a) a definition should state the essential attributes of the thing defined; (b) a definition must not contain the name defined. (c) The definition must be exactly equivalent to the species defined. (d) A definition must not be expressed in obscure, figurative, or ambiguous language. (e) A definition must not be negative where it can be affirmative. Example—"A square is a quadrilateral whose sides and angles are equal."

4. "By arranging in an orderly way the verb forms that in the various modes and tenses correspond to the different persons and numbers of subject nouns and pronouns, we have what is called *conjugation*." If, in this arrangement, we use only a single person and number, the group of forms is called a *synopsis*.

5. (1) "To be" has a double use, (a) an *adjective* use, as the modifier of "it;" and (b) a *substantive* use, as the attributive object of "believe."

"to teach" is adjective in use, as a modifier of "it;" or, if "it" is considered an expletive, "to teach" would then take its place as the subject of the infinitive "to be;" "to think" is substantive in use and is the direct object of "to teach." ("mind" is the indirect object.)

(2) "to come" is used as a predicate adjective.

(3) "*to think*" is substantive in use and is the objective subject of "to seem" (it gets its government, or case, from "said"); "*to seem*" has a double use, that of an adjective limiting "to think," and that of a noun, as the attributive object of "said." "*to be*" is used as a predicate adjective, or complement; "*to act*" is used as a noun, as a complement of "to be," and as an attribute of "to think."

If the infinitives were separated by commas, they would be the direct object of "said."

6. (a) Large, ripe, yellow apples were very often seen. (b) These questions can surely be settled peacefully.

READING.—1. His native abilities are his mind faculties, of which memory is especially strong. His acquired abilities are his keenness of interest and his power of observation.

2. The *alphabetic* method by which the letters are learned first, and then words. The *phonic* method, by which the elementary sounds are taught first, and then the words, by combining the sounds.

The *sentence* method, by which the thought is expressed first orally and then the printed or written expression is presented and taught.

The *word* method, by which the words are taught as wholes; the pupils learn the names of the letters after they have acquired a knowledge of a sufficient number of word-forms to begin reading. This method is the best because children recognize objects as wholes rather than by noticing the individual parts of which they are composed.

The objection to the *sentence* method is that the whole sentence is too comprehensive and complicated to be grasped at once by the pupil; and he soon begins to recognize the separate words.

3. Use the *word* method, and supplement it with the *alphabetic* and the *phonic* method. (See directions in First Reader.)

4. The period and the interrogation point, for these belong to the written forms of most of the expressions used by pupils; they then soon learn the exclamation point, and so on.

5. (See First Reader.)

SCIENCE OF EDUCATION.—1. (See page 86, General Method.)

2. It would cause him to note every intimate relation that history had with geography, language, natural science, etc., and to weave all the related parts together so as to produce a unified combination. (See pages 86 and 87.)

3. Because "concentration draws the feelings and the will equally into its circle of operations" (See page 87.) "We do not desire to find in the school studies a new centre for a child's life so much as the means for fortifying that original strong hold of character which rests upon native mental characteristics and early home influences."

4. By having harmony between the school and home life of the child is meant having the training and development of each work to the same end—the upbuilding of moral character. (See pages 86, 89, 90.)

5. To organize one's knowledge of a subject is to arrange its main parts logically as to dependence or development; and to classify the minor details in accordance with similar relations, properties, functions, etc.

6. It does, for many relations are so intimate that the knowing of one idea positively includes the knowing of one or more others, though in a different subject. (See page 91).

7. (See page 93).

U. S. HISTORY.—1. The bicycle has proved to be so attractive for riding, and so useful in certain kinds of business, that it has displaced the horse in many fields of action. This, to a very great extent, has decreased the sale of horses, and as a natural consequence, that of vehicles also.

2. "Jackson's hostility to the bank had been shown throughout his first term of office. In 1832, he vetoed the bill for its re-charter. In 1833, he removed the public money which had been deposited in the bank, and distributed it among sundry state banks. The President declared the bank to be an institution too powerful and despotic to

exist in a free country. He believed that the government's revenues, which were deposited in the bank, were used for the enrichment of its managers, to the injury of the people, and that the bank tried to punish or reward public men in and out of Congress for opposing or helping it. He therefore declared war on it and stated his opinion of it very plainly in his messages to Congress.

3. The Sherman Act of 1890 directed the Secretary of the Treasury "to purchase from time to time silver bullion to the aggregate of 4,500,000 ounces, or so much thereof as may be offered in each month, at the market price thereof, not exceeding \$1 for 371.25 grains of pure silver, and to issue in payment for such purchases of silver bullion Treasury notes of the United States." Section 3 of the act provided that there should be coined monthly 2,000,000 ounces until July 1, 1891, after which date the coinage should be regulated by the amount necessary to provide for the redemption of the Treasury notes issued under this act. On August 7, 1893, President Cleveland convened Congress in special session, for the purpose of repealing the purchasing clause of this act. In his message he spoke of the "alarming and extraordinary business situation" and of the "unfortunate financial plight." Much gold was going abroad to pay off commercial paper held by foreigners against Americans.

4. Commercial panics have occurred in 1817, 1837, 1857, 1873, 1884, 1893. To a greater or less degree, lack of confidence in money affairs and undue speculation have been the primal causes of each. After the war of 1812 there was a rise in prices, followed by money stringency and large declines. The panic of 1837 was due largely to speculation in western lands and the incidents connected with the downfall of the United States Bank. Crop failures partly caused the panic of 1857, and also that of 1873. The latter was also aided by certain financial legislation and excessive railroad building. In May 1884, money rose to 3 per cent. per day and stocks declined rapidly. But this panic was of short duration, and though there were many severe failures, business soon resumed its usual energy.

5. In the campaign of 1840, the Whigs advocated (a) a protective tariff, and (b) the re-establishment of the U. S. Bank; and they opposed the sub-treasury plan. However in this campaign the policy of the Whigs is more clearly set forth by the single statement, *opposition to the administration*; their campaign cry was "Harrison and reform."

6. In studying the lives of these men, we should single out those special attributes of character by which each one became renowned or accomplished some worthy deed. Each one of these special attributes should be noted carefully as to its intrinsic worth and the process of its attainment. Let the main points in their lives and characters form basis for the study of the institutions they represented or promoted. No other line of work is more interesting or inspiring to the minds of young people than the study of noble attributes of character and the great deeds achieved by those possessing them.

ARITHMETIC —1. $[(12 + 3 - 8) \times (18 - 2)] + (13 - 5)$.

2. (See text-book).

3. (a) The quotient is always an abstract number. (b) The divisor and dividend are like numbers, unless a concrete dividend is to be separated or divided into a certain number of equal amounts. (c) The remainder is like the dividened. (d) Multiplying or dividing both the the dividend and the divisor by the same number does not change the quotient. (e) $(\text{Divisor} \times \text{Quotient}) + \text{Remainder} = \text{Dividend}$. Etc.

4. $1.010 + 10.00010 = 11.01010$.

$1010.010 + 1010.0010 + .1000 = 2020.1110$.

Difference = 2009.1009.

5. $1000 + 1.30 = 769.23$; $1000 - 769.23 = 230.77$; hence, the true discount is \$230.77; $\$300 - 230.77 = \69.23 , the difference.

6. Based on the old definition of a fraction ("a part of a unit"), the terms *proper* and *improper* were consistent. Based on a modern definition (one or more of the equal parts of a unit) the distinguishing feature giving rise to these terms vanishes, and they are merely convenient.

7. Cost = 80; selling price = 100; therefore the gain = 25%.

8. The price paid per acre was \$50. The description was as follows: The north half of the northeast quarter ($\frac{1}{4}$), of the northeast quarter ($\frac{1}{4}$), of section twelve (12), township one (1) east, range four (4) west containing twenty acres more or less.

FOOD FOR THOUGHT.

[Send all communications to W. F. L. Sanders, Connersville, Ind. They should be received by June 18. Be prompt. Write only on one side of your paper.]

SOLUTIONS RECEIVED.

125. Two circles intersect in A and B. Any line, PAQ is drawn through A, cutting the two circumferences in P and Q. Through P and Q diameters are drawn intersecting in X. Show that the angle X is constant and find its locus. [J. C. GREGG, Brazil.]

SOLUTION.—Let the figure be drawn as indicated, with A at the upper intersection, and B at the lower; let O and S be the centres, and draw OA, SA and OS.

Angle P = PAO, and angle Q = QAS;

$PAO + OAS + SAQ = QPX + PXQ + PQX$;

Therefore, $OAS = PXQ$; but OAS is constant; hence PXQ is constant.

Since X is constant, its locus is the arc of a circle passing through O, B and S and having the chord OS; the angle OXS is inscribed in the segment. A similar locus passes through OAS. There are four variables in the problem, the radius of O, the radius of S, the line OS, and the angle PAB. When $O = S$, and $OS = AB$, the locus of X is a circle passing through A, O, B, and S. [J. S. AXTELL, Portland.]

126. The loss on broadcloth was \$40, and the loss on silk was $7\frac{1}{4}\%$. The loss per cent. on the silk was 75% of the per cent. of loss on broad-

cloth. For what where the goods sold if the loss on the silk was 10% of the loss on broadcloth. [W. A. MILLER, Atlanta.]

SOLUTION.— $7\frac{1}{2}\%$ = loss on silk = 75% of loss on broadcloth; hence all the loss on broadcloth = 10% = \$40; therefore the cost of broadcloth = \$400, and the selling price was \$360. Loss on silk = $7\frac{1}{2}\%$ = \$4; hence cost of silk = \$53 $\frac{1}{3}$; and the selling price = \$49 $\frac{1}{3}$; \$360 + \$49 $\frac{1}{3}$ = \$409 $\frac{1}{3}$.

[W. F. HEADLEY, Bloomington.]

127. How much 3 per cent. stock has been sold at 89 if the owner's income is increased by \$12 a year by investing the proceeds in 4 per cent. stock at 92?

SOLUTION.—\$100 stock at 89 yields \$3; \$89 invested in 4% stock at 92 yields \$3 $\frac{1}{9}$; \$3 $\frac{1}{9}$ - \$3 = \$ $\frac{1}{9}$; $12 \div \frac{1}{9} = 108$; 108 times \$100 = \$10800.

[WALTER N. VANSCHOYOC, Crawfordsville.]

129. Given $\begin{cases} (x+y)^3 + (x+y) = 30 \\ (x-y) = 1 \end{cases}$ to find the values of x and y .

SOLUTION.—

$$(3) \dots (x+y)^2 + 1 = \frac{30}{x+y} \dots \dots \dots (1) + (x+y).$$

$$(4) \dots (x+y)^2 - \frac{30}{x+y} = -1 \dots \dots \dots \text{transposing.}$$

$$(5) \dots (x+y)^2 - \frac{30}{x+y} + \left(\frac{5}{3}\right)^2 = \frac{16}{9} \dots \dots \dots \text{adding } \left(\frac{5}{3}\right)^2 \text{ to each side.}$$

$$(6) \dots x+y - \frac{5}{3} = \frac{4}{3}; x+y = 3.$$

Hence $x=2$ and $y=1$.

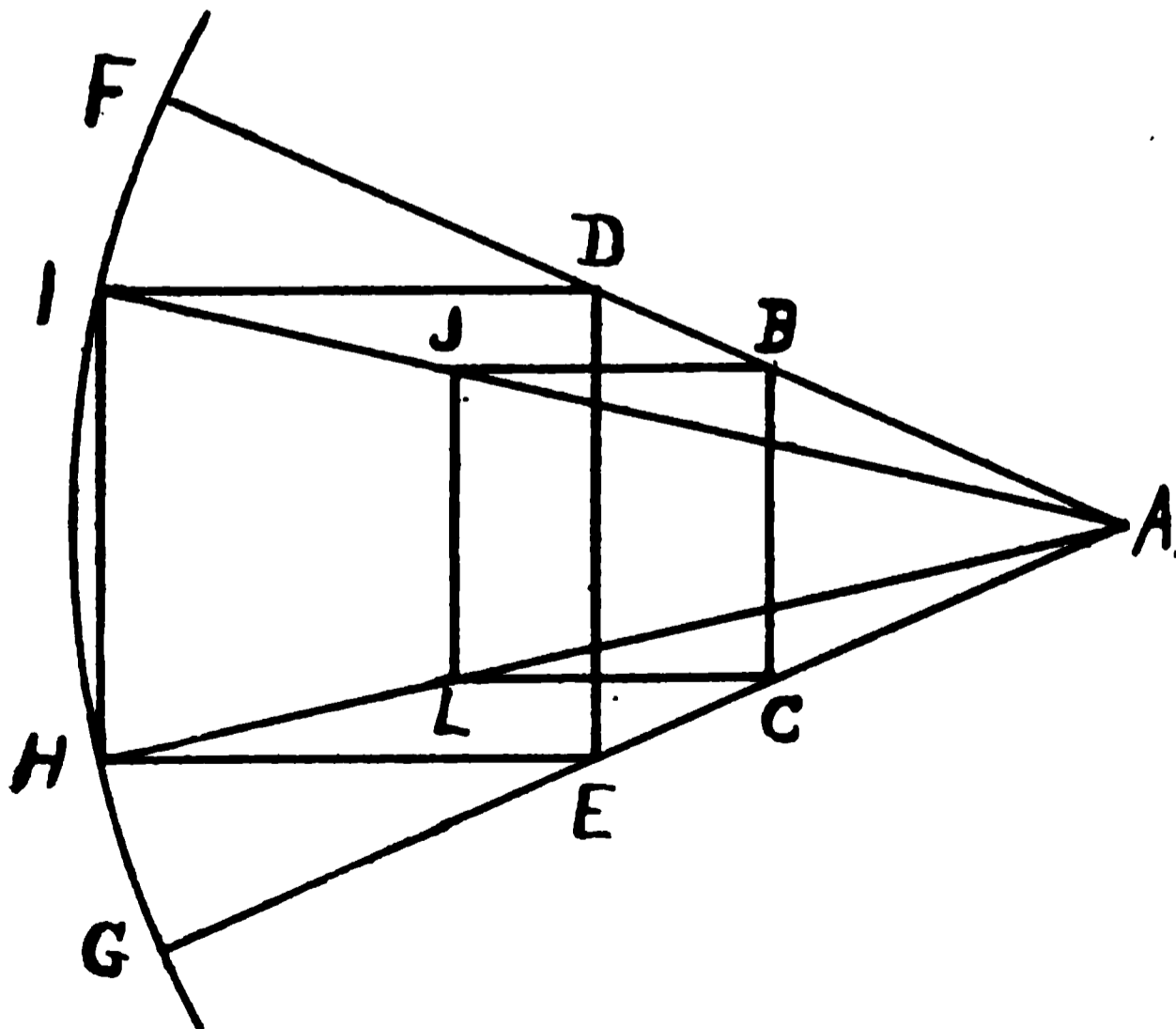
[D. H. LOOMIS, Valparaiso.]

By cubics, Otto Clayton found the following additional values:—

$$x = \frac{1}{4} \left(1 \pm \sqrt{-31} \right) \text{ and } y = \frac{1}{4} \left(-3 \pm \sqrt{-31} \right).$$

PROBLEM 95 To inscribe a square in a sector, so that the angular points shall be one on each radius and the other two in the circumference.

SOLUTION.—



Let AFG be the sector. Lay off on the radii any two equal (convenient) distances, AB and AC; on BC erect the square BJLC. From A

draw lines through J and L meeting the arc at I and H. Join I and H and at I and H erect the perpendiculars ID and HE; join D and E; the figure IDEH is the square required. For, $JB : ID :: JL : IH$; and as $JB = JL$, then $ID = IH$; also $HE = IH$; therefore, $IH = DE$, and the figure is a square.

[J. STOMMEL, Hanover Center.]

Otto Clayton's answer to 121 is 477.8 sq. rds. A solution will appear in July number.

To No. 235 (Wentworth's Geom.), J. C. Gregg sends the following:

Let F be the point of contact of the circles, and AB the given common tangent. Draw common tangent FC intersecting AB at C, and draw radii AD and BE. Also, draw CD and CE. $CA = CF = CB$; CD bisects angle ACF and CE bisects angle BCF; therefore angle DCE is a right angle, and $DF : CF :: CF : FE$, or $2DF : 2CF :: 2CF : 2FE$, or $2DF : AB :: AB : 2FE$, Q. E. D. (This is certainly a superior demonstration. ED.)

CREDITS.—126, Philip Abell, Velpen....129, D. H. Loomis, Valparaiso....125, 126, 127, 128, 129, J. Stommel, Hanover Center....126, 127, Walter N. Vanscoyoc, Crawfordsville....127, 128 John Morrow, Charleston....126, 127, Alton Blunk, Crown Center....121, 129, Otto Clayton, Fowler....126, 127, 129, W. F. Headley, Bloomington....126, 127, 125, 129, J. S. Axtell, Ph. D., Portland.

QUERIES.

41. What railways connect the Atlantic and Pacific ports of North America? (Complete Geography, page 129.)

[BOYD WILSON, Brownsville.]

42. M gave a note to N for \$1200 for 5 years at 8%. The interest was not payable annually, and was understood to be due only at the maturity of the note. Upon the note following payments were accepted:—At the end of 2 years, \$500; at the end of 3 years, \$300; and at the end of 4 years, \$200. What was due at maturity?

[J. S. AXTELL, Ph. D., Portland.]

43. Has a county superintendent the right (legally) to keep manuscripts (not graded) from the March examination until in May?

[From Seymour, Ind.]

PROBLEMS.

130. A man bought a certain number of bonds of the 3 per cents. at 84 and the same number of $3\frac{1}{2}$ per cents. at 91; his income from both investments together was \$260; how much money did he invest?

131. I look at my watch between 4 and 5; on looking again between 7 and 8 the hands have exactly changed places; at what time did I first look at my watch?

132. A man sells an article at 4 per cent. profit; if he had bought it

at 4 per cent. less, and sold it for 20 cents more, he would have gained 10%; what was the cost price?

133. A cone of loaf sugar is 1 meter high, and the diameter of its base 40 centimeters. How far from the base must the cone be cut by a plane parallel to the base, in order that the two parts may be equal in volume?

MISCELLANY.

ATTICA high school graduated a class of six—all boys. Just think of it—*all boys*.

GAS CITY is three years old, and employs nine teachers. W. O. War-rick is superintendent.

BORDEN INSTITUTE is now in its thirteenth year, and boasts the largest attendance in its history.

THE Portland High School graduating class numbers 20 this year. C. L. Hottell is school Superintendent.

AT CONNERSVILLE the high school course has been extended from a three years' course to a four years' course.

THE INDIANAPOLIS high school has enrolled this year more than *one thousand* pupils. Geo. W. Hufford is principal.

THE Benton County Normal will open in Fowler June 28 for an eight-weeks' session. Address Chas. H. West or Frank Carroon.

CARROLL COUNTY is arranging to support a high school in every township, so that all may have access to high school privileges.

"MIDLAND SCHOOLS" is the new name of Iowa Schools. It wishes to spread and begins by spreading its name. "What's in a name?"

KOKOMO has let the contract for two new eight-room school buildings, and the contract for a new high school building will soon be let.

THE Elkhart County Summer Normal will open in Goshen June 22. Supt. W. H. Sims, Dan J. Troyer and Jno H. Swartz are at the head of it.

The State Normal school has a large attendance this spring term notwithstanding the fact that a one year license is the standard of admission.

THE Marion Normal reports a larger attendance this term than ever before in the history of the school. Its summer session will open June 30.

KOKOMO.—The high school teachers recently gave the senior class a reception at the hotel, which, as reported in the papers, was a "brilliant" affair.

LAGRANGE AND NOBLE counties will hold a joint institute the last week in August, at Rome City. A. W. Edson, of Mass., is to be one of the instructors.

THE Ohio Valley Normal at Corydon opened April 7 with 125 stu-

dents, and now enrolls about 200. This is certainly doing well. R. A. Brown is Principal.

SHELBY COUNTY is one of the counties in the State that furnishes high school privileges free to *all* its children. Anderville Shaw is Superintendent.

VINCENNES teachers celebrated the centennial anniversary of Horace Mann's birthday. Supt A. E. Humke made an address which was highly commended.

A SUMMER Normal will open at Rockport, June 1 for six weeks. The instructors are County Superintendent J. W. Nourse, A. C. Huff, F. S. Morganthaler, and O. P. Foreman.

THE Tri-State Normal at Angola, reports, "Never so many students in Angola as now—and a fine class." It also reports the starting of another Latin class making the fifth this year.

OUR DUMB ANIMALS, published at Boston, which is sent to teachers for 25 cents a year, should be in the hands of every teacher for the use of the school. Kindness to animals should be taught in every grade.

THE Vigo County Board of Education has raised the standard requirement of the teachers so that no one holding but a six-months' license is eligible. Teachers in the graded schools are required to have a two years' license.

WHITLEY COUNTY.—Superintendent Naber gives a special diploma to such pupils as have read "one or more books of the Y.P.R. C. library during each of the four different years." This county has spent over \$1250 for library books since 1892.

"THE Training of the Will" is the subject of a monogram by Dr. John Dewey, of Chicago University. It has been published as a supplement to the Herbart Year Book for 1895, and makes a pamphlet of 136 pages. Address Chas. A. McMurry, Normal, Ill.

THE summer school of pedagogy at Buffalo which is to follow the N. E. A., is to be made an attractive affair. A large number of the most prominent educators of the country have been employed to give lectures. For particulars address Prof. F. M. McMurry.

MISS HARRIET NOBLE has a course of lectures on Shakespeare's Tragedies which she is willing to give to teachers' institutes. Miss Noble was for many years Professor of English literature in Butler University, and is a lady of culture. For terms address her at Indianapolis. See advertisement on another page.

PURDUE UNIVERSITY.—The annual catalogue for '95 and '96 with announcements for '96 and '97, is a very full and satisfactory statement and showing of what this institution is doing. The ground covered is something to be wondered at. Any one interested can secure this catalogue by addressing the President, J. H. Smart, LaFayette.

VINCENNES UNIVERSITY, in its annual catalogue for 1895-6, with calendar for 1896-7, besides making a complete showing of the work the school is doing, gives a history of the institution, which

is interesting. Its first board of trustees was organized in 1806, with William Henry Harrison as president of the board. It came near being the State University.

LAWRENCEBURG.—G. D. Knopp, an I. U., 91 man is superintendent of these schools and will probably be continued for a sixth year. T. M. Meek is principal of the high school. The writer recently looked in upon most of these schools and was pleased with most of the work he witnessed. Certainly the Lawrenceburg children are being well cared for.

SHELBYVILLE has closed a successful year and its thirty-six teachers were nearly all re-elected. Supt. J. H. Tomlin was, of course, re-elected. He has worked hard and his teachers have heartily co-operated with him. He believes that a teacher should be a pupil as well as a teacher. Where the superintendent and teachers *study* together there is always growth.

THE NORTHERN INDIANA NORMAL, at Valparsaiso, is over-running College Hill as usual—only more so. It is like Longfellow's tree—it perpetuates its youth by *growing*. This is double the size of any other normal school in the state, and yet it is only a "school"—not a "*University*"—not even a "*college*," and Mr. Brown is not "president" but "*principal*." This is refreshing.

HOPE NORMAL SCHOOL is moving on smoothly. The writer can bear testimony that the building is large and commodious, and is situated in a most charming campus. The town of Hope is noted for its educational sentiment and for its high moral character—just think of it—a town of 1,000 population and not a saloon. The work done is good, and students get the worth of their money.

MONTICELLO.—At the Educational exhibit recently made at Remington under the auspices of the N. W. Athletic Association, Monticello won nine out of twelve prizes offered. It took the prize for the best general exhibit and the one offered for the best home-made physical apparatus. This has been a prosperous year for the Monticello schools, and Supt. Hamilton and his entire corps of teachers have been re-elected.

THE Bay View Summer School has grown to be one of the great institutions of this country. The number of courses of study provided and the character of instructors employed can not be surpassed. The climate at that season of the year (July 8) is always attractive, and no place in the country can equal this in which to combine pleasure with profit. For particulars refer to last month's JOURNAL, or write to J. M. Hall, Flint, Mich.

THE ELKHART High School graduated thirty-four this year, and the themes of the graduating essays for the entire class were from Shakespeare. The following are some of them: A defense of Shylock, Portia's suitors, Moral Element in Macbeth, Hamlet's sanity, Wolsey's Fall, Mark Antony's Funeral Oration. Is it not a good plan to have boys and girls write on subjects that they have studied and know some-

thing about? S. B. McCracken is principal and D. W. Thomas is superintendent.

INDIANA UNIVERSITY still grows. Notwithstanding the fact that its standard of admission has been raised it has more students to-day than ever before. The enrollment up to April 10 was 829, and remember it has no preparatory department. David Starr Jordan is to make the baccalaureate address this year.

INDIANAPOLIS Business University opened a normal department April 6 which is well attended. The instructors are Eli F. Brown, Geo. F. Bass, Jesse H. Brown, F. B. Moore. Of course it is good.

AURORA has two school buildings, one of ten rooms in which the high school is located, the other of nine rooms. The new superintendent Sanford Bell has been modifying and enriching the course of study and every thing seems to be working well. Mr. Bell himself is certainly a superior teacher. Miss Anna Suter who has been principal of the high school for many years, has built herself thoroughly into the affections of the people. The writer was not able to reach all the rooms in his recent short visit but those he did visit he was well pleased with.

COLUMBUS employs thirty-five teachers, counting the superintendent and the special teacher of music. The high school here has one of the best equipped chemical laboratories in the state. The board is very liberal and supplies money for all needed appliances. The writer recently witnessed some work in these schools; some of the primary work was superior. The concert work in number surpasses anything witnessed elsewhere in this line. The teachers are devoted to their work, and manifest a progressive spirit. Supt. Carnagey, in closing his sixth year, has the confidence of his teachers and of the people.

FRANKLIN COLLEGE is now a well equipped institution. Its museum is not as large as some, but is very complete. Its laboratory is well fitted up, so that students can do original work and pursue their natural science work according to the most approved methods. Its library contains about 10,000 well selected volumes. It has an endowment of about \$200,000. It has enrolled this year about 250 students. Its faculty is composed of well qualified, earnest men and women. Miss Thompson, who has been at the head of the Mathematical Department for many years, is one of the best teachers of mathematics in the state. Pres. W. T. Stott is the oldest and one of the most efficient college presidents in the state.

MOORE'S HILL COLLEGE is doing its usual good work. It has an attendance of about 130 earnest, diligent young men and young women who know why they are there. They have *come* and have not been *sent*. About half of these are in the college department. Dr. J. H. Martin is president and he is ably seconded in his endeavors by a carefully selected faculty. Most of the students here are getting more than they would get were they in a larger place in a larger school. Moore's Hill has never had a saloon in its entire history. This means that the moral element is in the majority and of a high order. A recent visit

by the writer found the college in excellent working order, and a commendable spirit pervading the entire institution.

THE Anderson Normal University will open at Anderson Tuesday, Sept. 1, 1896. The board of directors include some of the best business men of Anderson. The faculty numbers twenty-four well-known educators. Wm. M. Croan has been chosen president. Mr. Croan was formerly county superintendent of schools for Madison county, but for the past ten years has been at the head of large educational institutions in Iowa and Nebraska. The finishing touches are being put on the college buildings, and they will be ready for the furniture apparatus, etc., by July 15. The promoters are sanguine of a large attendance from the beginning.

THE Western Drawing Teachers' Association, which met in Indianapolis April 30 and May 1 and 2, turned out to be a remarkable meeting. Prominent drawing teachers and others interested in the relation of art to education and life were here from many States. The exhibition of drawing was the largest ever made in this country, save that made at the World's Fair at Chicago. Besides Indianapolis, LaFayette, Richmond, Tipton and some other Indiana cities had displays. Marion County was the only county that made a display of country school drawing. Miss Rhoda E. Sellick, teacher of drawing in the Indianapolis High School, was chairman of the executive committee, and deserves great credit for the success of the meeting.

THE State Board of Education, at its meeting May 13, elected the following trustees for the State University: B. F. Shively, of South Bend; Samuel R. Lyons, of Bloomington, and R. I. Hamilton, of Huntington. Life state licenses were issued to J. C. Bryant, Irvington; Virginia G. Cory, Dunreith; Frank D. Gray, Freemont; J. A. Greenstreet, New Castle; T. E. Kinsey, South Bend; George W. Miller, Kokomo; Kitty E. Palmer, Franklin; Lell Segur, Decatur; O. B. Zell, Clinton. Professional licenses were issued to Frank Brubeck, Fowler; E. C. Crider, Buck Creek; E. S. Miller, Valparaiso, and C. M. McDaniels, Madison. The following high schools were awarded commissions making their diplomas good for entrance at the State University, Purdue and the State Normal: Brookville, Albion, Kentland and Fortville. The Board, in its School Book Commission capacity, received bids on Grammars to take the place of the ones now in use in the state, and then adjourned two weeks in order to examine and compare the books. The JOURNAL will probably go to press before the decision is announced.

THE THIRD ANNUAL CONGRESS OF THE ILLINOIS SOCIETY FOR CHILD STUDY was held in Chicago May 13, 14, 15. It was a great success. Three sessions were held each day and the attendance at each session ranged from 500 to 1000. A large number of states were represented. G. Stanley Hall, of Massachusetts, was present and made two able addresses. It will be remembered that Mr. Hall is one of the pioneers in this department of educational work. John Dewey, of Chicago University, made an address. President John W. Cook, Prof. C. C. Van Lie

and Prof. Chas. A. McMurry of the Illinois State Normal were present and took an active part. Probably no other state normal school in the country is making itself so much felt in the educational world as is this one.

MISS N. CROPSEY, assistant superintendent of the Indianapolis schools, Miss Mary Nicholson, principal of the Indianapolis Training school, and Miss Margaret Hamilton, a supervising principal of the Indianapolis schools, were the only Indiana representatives.

C. C. VAN LIEW, of Normal, Ill., is secretary of this society and can give all needed information.

THE SOLDIERS' ORPHANS' HOME located at Knightstown is one of Indiana's educational institutions and should be recognized as such. It now has in it about 650 inmates all under 16 years of age; as that is the age limit. Several of these are babies and many of them under six years of age. As soon as old enough they are all put into school. In the last few years when they are old enough to work they spend half the day in school and the other half in learning to work, so that many of them leave the institution with a trade well learned. The average boy or girl who stays in the institution to the age limit goes out with a good common school education, sufficient to enter an ordinary high school. Whenever *good* homes can be found for any of these boys or girls they are placed in them, and thus room is made for other unfortunates. There are about 250 applicants that cannot be admitted for want of room. The head of this Home is A. J. Graham, who was for many years superintendent of the Columbus schools. It is not necessary to add that the institution is in excellent hands and is well managed. His teachers are well qualified and in sympathy with their work. The best possible influences are brought to bear on the children and they are better off than thousands of children who have parents and homes.

THE South Central City Superintendents have an organization of their own. They meet in the different cities represented, and spend most of the day in visiting the schools. In these visits each superintendent is expected to note carefully and critically what he sees. At the close of the visiting the superintendents come together and report fairly but faithfully all faults, and make whatever suggestions may be deemed appropriate. Of course the good things are reported as well as the bad. On May 8 the meeting was held at Franklin. The attendance was not large, but all present felt well paid for coming. Supt. Will Featheringill and his teachers did all that could be done to make the visit pleasant. When the superintendents met for criticism, there was a general expression of satisfaction with the schools. The spirit of the teachers was specially noted. The relation of pupils to teachers seemed to be uniformly sympathetic and kindly. In one room the order was criticised; in another the teacher used up too much time in having the work placed on the board, and did not have enough time left for real class work; in another the teacher spent too much time in having the children talk about the reading lesson before any reading

was done. The questions went into such detail and were so long drawn out that the children lost interest before the reading was begun. These criticisms were special and not general. The judgment, as a whole, was very favorable to the schools. It was suggested that the school buildings needed the special attention of the trustees during the summer vacation—paper, kalsomine, paint.

MADISON.—The writer recently spent a pleasant and profitable day in the Madison schools. The high school is in excellent condition. The original botany work was specially good. With such a principal as C. M. McDaniels in the high school, the superintendent can safely give most of his attention to the other schools. Here the 8th grade is placed in the high school building, and is taught by high-school methods. In this way the pupils have the benefit of special teachers. Supt. Mott says the plan is working well, and thinks that in the future the special teacher plan may be extended to the 7th grade, and possibly to the 6th. A beautiful spirit pervaded the schools, and pupils and teachers seemed to be *friends*. The work was not uniformly good, but all creditable. The thing that is specially noticeable in these schools is the emphasis placed upon language. Every lesson was a language lesson. Several *talking* lessons were witnessed—some topic with which the children were familiar was introduced, and then the children were induced to talk about it. Supt. Mott is of the opinion that good talking and good thinking go together. In the primary grades the writing was unusually large—the letters being two or three times the ordinary size—this to give the child freedom and muscular control. Reading is divided into three steps—mastery of the words, mastery of the thought, expression of the thought. For the first time Madison employs a special teacher in music. Supt. Mott is doing an unusual amount of work with his teachers. He has a meeting with the teachers of each grade each month; he holds one general teachers' meeting each month, and once each month has a monthly meeting for all who wish to attend for the study of applied psychology. Special preparation is made for all these meetings, and of course good must result. The buildings in Madison are old and not conveniently arranged, but superior ability in the principals and hearty co-operation on the part of the teachers overcome all difficulties and give the people schools that they may well be proud of.

SIXTY-THREE applicants were recently examined for state and professional licenses, and only 13 passed. This indicates that the standard is high and the marking close. The failures were well distributed among the subjects. The record shows that 20 fell below the minimum in algebra, 23 in physics, 15 in botany, 15 in civil government, 18 in American literature, 9 in science of education, &c.

THE Indianapolis Industrial Training school set apart May 29 as "Visitor's Day." Special invitations were sent to patrons and friends. The attendance was large and visitors were delighted with what they saw. The exhibits in wood-working, iron, steel-forging, foundry and pattern work, cooking and sewing, freehand and mechanical drawing &c., were all good. C. E. Emmerich is the principal.

FOR INFORMATION in regard to Indiana headquarters address W. A. Bell. The Gruenr Hotel, a new centrally located \$2 a day house will be Indiana headquarters. For boarding in families at \$1 a day address Albert E. Swift, Buffalo.

THE proceedings of the National Superintendents' Association, held at Jacksonville, Fla., have been printed and make a volume of 162 pages. The volume contains all the papers and discussions and makes a valuable addition to pedagogical literature. All paying members of the National Educational Association are entitled to it.

A SUMMER Normal will begin in LaPorte, and continue six weeks. It is intended specially for teachers. Superintendent Galbreth, J. E. Hagerty, and A. G. McGregor are to be the principal instructors.

THE County Superintendents will hold their annual state meeting at Indianapolis June 25, 26. Headquarters at the Dension Hotel.

PERSONAL.

O. L. VORIS is closing his sixth year as principal at Centreville.

E. E. VANCE of Hagerstown, will be in charge at Arcadia next year.

JOHN A. SHAFER, I. U. '94, will remain at Williamsburg another year.

J. H. TOMLIN has been re-elected superintendent of the Shelbyville schools.

MISS JANIE DEMING will continue as principal of the Shelbyville high school.

A. D. MOFFET has been re-elected superintendent at Decatur for another year.

W. P. BURRIS, superintendent of the Bluffton schools, has been re-elected for a sixth year.

ANDREW E. MARTIN has been elected superintendent of the West Indianapolis schools.

J. W. HAMILTON has been re-elected superintendent of the schools at Monticello for next year.

H. C. DIXON has resigned at Elizabethtown to accept the principalship of an academy in Penn.

W. C. DAY, a graduate of Earlham College, leaves Arcadia to take charge at Westfield next year.

ALBERT J. BROWN, a Leland Stanford University man, will have charge at Irvington next year.

A. R. HARDESTY is superintendent at Hobart and graduates ten from his high school, the largest class ever graduated in that town.

T. A. MOTT, superintendent at Madison, and fourteen of his teachers recently spent a day in the Indianapolis schools.

EDWARD AYERS, W. H. Hershman and J. O. Lewellen have been selected as visitors to the State Normal this year.

MISS CORNELIA CLARK, of Monticello, has accepted a position in Miss Whiton's Classical School for Girls, New York City.

PROF. LANGDON S. THOMPSON, formerly of Purdue University, has for many years past been supervisor of drawing in Jersey City, N. J.

MISS KITTIE E. PALMER, principal of the Franklin high school, is regarded as one of the strongest high school principals in the state.

J. A. CARNAGEY, superintendent of the Columbus schools has decided to spend his summer vacation in Chicago University in special study.

H. P. GILLMORE will continue as superintendent at Zionsville and Miss Flora Muminger, of Anderson, will be principal of the high school.

S. E. HARWOOD, Prof. of mathematics in the Southern Illinois State Normal at Carbondale, will do some institute work in "dear old Indiana," this summer.

J. S. HALL, formerly superintendent of the Crawford county schools, is now proprietor of the English Hotel at Indianapolis. He is always glad to see his teacher friends.

T. A. MOTT has been re-elected superintendent of the Madison schools at an increased salary, which indicates that his first year's work has been entirely satisfactory.

J. J. ALLISON resigns the superintendency at Crown Point to accept a similar position at Boise, Idaho. Mr. Allison will leave behind him many warm friends in Indiana.

O. F. WATSON, superintendent of Jefferson county, has recently moved out of Madison to the suburbs on his farm where he is comfortably and most pleasantly located.

W. W. BLACK, an Indiana man, for three years past superintendent of the Paris, Illinois schools, has resigned his place in order to study in some university for a year or two.

W. H. FERTICH has been re-elected superintendent at Bloomington. He reports that the conditions for doing good work the coming year will be much better than in the past.

O. L. LYON, one of Putnam county's leading teachers, has spent the last year in Boston University and secured the degree of Ph. D. He has now returned and is ready for work.

G. M. NABER, superintendent of Whitley county, recently delivered a professional lecture before the students of the Tri-State Normal at Angola, which is spoken of in the highest terms of praise.

E. B. BRYAN, of the Indianapolis high school, has resigned his place to accept a professorship in Indianapolis University—Butler College. Mr. Bryan is well and favorably known as an institute worker.

HORACE ELLIS, who resigned the superintendency of the North Vernon schools last January to attend the State University, has accepted the superintendency of Cambridge City schools. The Board did well.

JNO. B. PEASLEE, formerly superintendent of the Cincinnati schools, has several lectures which he is willing to deliver at teachers' institutes. Supt. Peaslee is a strong man and will make a good lecture and do good work. Address at Cincinnati.

N. C. JOHNSON was re-appointed superintendent of the Cambridge City schools but resigned at the close of his seventh year's work in order to spend a year or two in study in some good university. The local papers speak in high terms of Mr. Johnson's work.

O. C. SEELYE, for some time past superintendent of the schools at Racine, Wis., has been elected superintendent of the La Porte schools. Mr. Seelye is a graduate of Michigan University, has had successful experience, and comes highly recommended. It is to be hoped that his coming may be mutually pleasant and helpful to both Mr. Seelye and the state.

C. A. KING, a graduate of the State Normal and also of the State University, has been for the last three years principal of the high school at Decorah, Iowa. He will spend the summer at Warren, Ind., where he will assist in a normal. Next year he will spend in Howard University.

MISS C. BELLE MOORE, primary teacher at Lawrencburg, has prepared a series of sentences to be used as supplementary to the reading lessons of the first reader. Only the words in the book are used but they are differently grouped so as to give more exercise in reading. An excellent plan.

HUGH BROWN, who is well known to many Indiana teachers as the genial agent of Allyn & Bacon, has changed his work and is located at Ann Arbor, Mich., and will hereafter represent the Home Study Association which has its headquarters at Ann Arbor. Mr. Brown is a college graduate and a genial gentleman.

HOWARD SANDISON, vice-president of the State Normal school, is gaining strength steadily and is doing a part of his usual work. By the advice of his physicians he has cancelled his engagements for institute work this summer. Teachers and superintendents will regret this, but it is doubtless a wise thing to do.

MISS MARY HOLLINGSWORTH, a graduate of Purdue University and one of Tippecanoe county's most respected teachers, while attending the N. I. T. Association at Marion, was attacked by acute pneumonia and has since died. She was a most excellent lady and leaves a large circle of friends to mourn her untimely departure.

MISS OPHELIA RODDICK has been a teacher in the Washington schools for over thirty years and has kept up with the procession. She is in the primary department and is quoted as "excellent." When asked why she does not get married and quit teaching she answers: "I am unwilling to give up a \$40 position for a 10 cent. man.

DAVID M. GEETING was re-nominated as state superintendent by acclamation by the republican party at its last state convention. Mr. Geeting has done such faithful and efficient work that it was taken by general consent that he should have a second term. Mr. Geeting is doing more field work than any of his predecessors.

EDWARD P. CUBBERLY, who has for the past five years been connected with Vincennes University and for the last three years its president, has tendered his resignation in order to accept the superintendency of the schools at San Diego, Cal. He has been elected for a term of four years. Indiana regrets to lose such men as Mr. Cubberly.

MISS LELIA PARR, now of Indianapolis, has recently returned from Boston, where she has spent five months in the study of music. She took lessons of Charles R. Adams, the teacher of Emma Eames, Mary Howe and other noted singers, and at the same time studied musical pedagogy with Leonard B. Marshall, instructor of music in the Boston public schools. Miss Parr did some very acceptable institute work last year and is capable of doing still better work this year. She is highly commended by her Boston instructors. She will be glad to do institute work this year.

MISS HELEN SANXAY, principal of the lower seminary building at Madison and secretary of the State Teachers' Association, has been seriously ill most of the time since the holidays. Her friends will be glad to know that she is now better but will not be able to enter school again this school year. As a school principal and as an instructor Miss Sanxay has but few equals in the state.

W. M. CROAN, as announced some time ago, will open a Normal and Business University at Anderson next September. He has published the names of a large number of persons who will constitute his faculty. So far as the writer knows these people, they are all strong in the departments for which they are selected. Mr. Croan says that his prospects for a large school are very encouraging.

JAMES C. BLACK, formerly superintendent of the Michigan City schools, and who is a graduate of the State Normal, and who recently secured a degree of Doctor of Pedagogy from the New York University, has accepted the chair of Pedagogy in the new normal school to be opened at Anderson next September. Indiana teachers will be glad to learn that Mr. Black is to locate in this state.

J. R. Starkey, superintendent of the Martinsville city schools, died May 9, of heart and stomach trouble, after several months' illness. Professor Starkey was by far the superior of any superintendent ever in authority at Martinsville. Had he continued till June he would have rounded out his twentieth year in charge of the schools. Mr. Starkey was born August 12, 1849, in Madison county, Illinois. He entered Lincoln University in the fall of 1869 and after four years graduated. During the winter of 1874-75 he was superintendent of the schools of Broadwell, Illinois. The following years found him teaching in Boyle county, Kentucky. In the fall of 1876 he was engaged at Martinsville and remained till his death. He leaves a wife and three children and a host of friends to mourn his loss. He was one of the choice spirits of this world, and to know him was to respect him. It will be a difficult task to fill his place.

BOOK TABLE.

FIVE-MINUTE OBJECT SERMONS TO CHILDREN.—By Dr. Sylvanus Stall, New York; Funk & Wagnalls Co. These brief sermons were first preached in Baltimore. The writer found upon taking charge of the Second English Lutheran church in that city, that his congregation contained no children, although the Sunday school connected with the church was flourishing. He conceived the idea of preaching a five-minute sermon to the children to precede the regular sermon. He had the satisfaction of seeing his congregations increase, and the Sunday School pupils a supply for the church. These sermons are well fitted for opening exercises in almost every school. Price, \$1.00.

BUSINESS NOTICES.

THE report that the Tri-State Normal, at Angola, is so full that it can receive no more students is incorrect. It is very prosperous but there is still room for a few more.

THE L. E. & W. Railway will sell tickets to Buffalo for a single fare for the round trip good for all rail, or to Toledo or Cleveland and then by boat. An excellent boat line runs daily between Detroit and Buffalo. For particulars apply to local agent or address C. F. Daily, Indianapolis.

See the advertisement of the C. H. & D. Railway on another page.

SCHOOL BOARDS contemplating changes can learn the address of the best Western and Eastern teachers, willing to change places, by addressing Orville Brewer, manager of the Teachers' Co-operative Association, 101 Auditorium Bldg., Chicago. We can assure all who write of confidence and honorable treatment. 2-tf.

THE Big Four is the only road running out of Indianapolis by which the entire trip can be made to Buffalo in one day by daylight and thus save the expenses of sleeper. See advertisement on another page.

IF YOU WANT to be successful in business life attend the Indianapolis Business University, the leading Business, Shorthand and Penmanship School. 11-tf

IN voting as to who the four greatest Americans were, the school children of one of our large cities agreed upon, Washington, Lincoln, Hamilton and Webster. It would seem very desirable that all school children should know how these heroes looked in life. The most excellent portraits which have ever been published of them for school room decoration are made by A. W. Elson & Co., 146 Oliver St., Boston, in their series of the "Makers of Our Nation." The portraits of Washington, Lincoln and Hamilton are now ready. Send for catalogue, giving full description.

AGENTS WANTED by large factory. Free outfit. Many teachers handle. One earned \$40 a week last year. Many \$10. P. O. Box 1371 New York. 6-ft

Tired Brain

Horsford's Acid Phosphate

A brain food. It increases the capacity for mental labor, and acts as a general tonic. It rests the tired brain and imparts thereto new life and energy.

Dr. O. C. Stout, Syracuse, N. Y., says: "I gave it to one patient who was unable to transact the most ordinary business, because his brain was 'tired and confused' upon the least mental exertion. Immediate relief and ultimate recovery followed."

* Descriptive pamphlet free on application to **Rumford Chemical Works, Providence, R. I.** Beware of substitutes and imitations. For Sale by all Druggists.

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LAW OF EDUCATIONAL PROGRESS.

L. H. JONES, SUPT. OF CLEVELAND SCHOOLS.

The near approach to the time for the annual closing of the schools inclines us to reflections appropriate to the season, rather than to profounder studies, which might be more in harmony with the opening school year. And yet our thoughts must not all be of the closing year, for there is a resurrection beyond; and the really progressive teacher is already planning to avoid the mistakes of the past and to multiply the forces which work together for higher success in the future. It is quite astonishing to one who knows little of our work or who thinks little, to be brought face to face with the enormous energy required in our profession to keep our work from stagnation and retrogression. Other professions, as law and theology, and to some extent, medicine, stand for precedent, authority and conservatism; ours dies, petrifies and fossilizes, if it does not stand for constant progress. The unusual ferment in educational doctrines in the last few years, and the excited advocacy of educational panaceas by enthusiastic discoverers, have sometimes almost made us fear that we shall be loosened from our safe moorings and sent adrift without educational compass or rudder. But suitable reflection shows us that these fears are groundless—that agitation, eccentricity of movement, excess in action and hyperbole in statement are really elements of progress; and that each of these as it grows into excess develops within it a corrective principle which makes the evil of it largely self-

limited. Indeed, all progress is more or less eccentric. It is a principle of navigation never to set the sail exactly in the wind's eye. Advancement is best made obliquely. Progress is rarely made by the application of a single force from behind but rather by the delicate balancing of contending forces, made self-regulative by their own contact.

I have recently seen in operation a device for regulating automatically the temperature of a room in cold weather. The rising of the mercury in the tube is the very force which cuts off the supply of fuel, thus enforcing the regulation of its own excesses. I have wondered why this invention should have been so long delayed when the principle involved has been so long known in many of its natural applications. It has long been known, for instance, that it is the delicate balancing of the centripetal and centrifugal forces which determines the orbits of the planets, sending them forward in their courses, unhasting and unresting, punctual to their appointed moments. The slightest preponderance of centrifugal forces, left uncorrected, would send a planet into illimitable space; while the increase of centripetal power unchecked would send it into the central solar fires. But fortunately nature is not left to the chances of unregulated or accidental acceleration of either of these forces. A self-regulative principle has been placed here by the Divine Power. Sure as the fates is it, unobtrusive as the falling dew, (if dew can be said to fall), beneficent as the sunlight. The very increasing centrifugal force which unchecked is the source of danger, is itself the beginning of an increasing centripetal power which rising to its flood, overmasters and corrects the former. In like manner its own excesses are the germinant forces of the opposing power, which in like manner rises to the mastery.

The planets in their orbits, subjected successively to the rising tide of these two powers, and apparently driven to destruction first in this way and then in that, are actually speeding on their happy way in obedience to the divine behest. Progress is thus everywhere made by concurrent action of contending forces, each blindly seeking its own, but all overruled and controlled by a higher power. This is the law of progress everywhere, no less in spiritual than in material things.

The history of education shows that these are the conditions of progress in our own profession. Each great educational reformer has believed himself the sole repository of the best methods of education. Subsequent tests of his theories have shown them to be partial statements of the truth, but necessary parts perhaps of a sound theory of education; and the very vehemence with which he proclaims his discoveries was necessary to give them their due place in the complex whole of a sounder judgment. History is repeating itself today as it has often done before. Educational prophets have risen in our time, many of them as confident in their plans and methods as were the prophets of old when they announced themselves the mouthpiece of the great Jehovah. The essential feature of all these new theories is that they are founded in truth; and for this reason they form a part of the network of contending forces which make for educational progress. For this reason it will not do for us to shut ourselves apart from them, merely because some one in his excess of enthusiasm has carried them to ridiculous extremes.

Whether it be child-study, Herbartianism, the doctrine of interest, nature study, apperception, or the theory of the culture periods, each new movement is a healthful troubling of the educational waters, too often allowed to stagnate; although it has sometimes been difficult to discover the semblance of the angel in the reformers who have been loudest in proclaiming their discoveries.

But however much all this noise and din of wordy battle may have seemed to distract our attention, the truth remains that we are in the midst of great reforms in educational theories and practices; and it behooves to keep ourselves open to the touch of truth from all these possible sources. There has been a better and profounder educational literature produced in the last decade than in any previous century of the world's history. Educational associations are discussing more live problems in more practical ways than ever before and summer schools for teachers are assuming a more helpful and hopeful attitude toward progressive teaching than ever before in the history of our profession.

I speak of these things now because many of us feel the necessity for a professional rejuvenation during the summer

months almost as much as we need the physical rest. Indeed to the true teacher the two oftentimes go hand in hand. At least wherever we spend the summer vacation, in travel, in study, on the bicycle, in country's shade or city's heat, let us keep ourselves open to the truth, desirous to know of these great onward movements of our time; that when we return to our work in early autumn we shall come to it refreshed in body and spirit, ready to be more than ever before a blessing to the children that shall be entrusted to us. May we become so indoctrinated with the truth which is the light of the world, that we shall no longer be mere reflections of the light; but rather may we become self-luminous, capable of lighting the torch of truth in others whenever they shall come within our influence.

MUSIC.

MISS LELLA PARR, INDIANAPOLIS, IND.

The "They's" are unnumbered, who having neither musical talent, nor musical taste, have been led into a contemplation, and finally a love of the "divine art" through its association with familiar texts. Unquestionably, it was not the music of Handel's Messiah which first caught the popular fancy, but the religious sentiment attached thereto: and this familiar element became the leading string to a contemplation of the art which vivified and colored the sacred story. Talk with those who are ordinarily called musical and you ascertain that if you were to abstract every ounce of sentiment and association from the melody "Home, Sweet Home," they would not care two raps about the melody. Half of the descriptive pieces that are played on the piano forte, have as small a portion of real musical value, as the dime novel has of literary value, and just about as many mistakes structurally as the novel has grammatically. But they are liked, because they bring to the mind the dripping of raindrops, the thunder storm, or the cannon's roar. It is the association, not the music, which in a great measure charms. Not *altogether*, however, for tone, musical tone, has in itself a peculiar charm, which Helmholtz, Hauptmann and other eminent

authorities unite in saying is purely physical, the same tone causing emotions as varied as the organizations upon which it falls; but that all organisms agree that concords produce pleasurable sensations, and discords, the opposite.

Tonal combinations are usually listened to, much as the gentle porker received the kindly rub on its bristles, with a grunt of satisfaction, because it *feels good*, without knowing or caring what kind of a stick caused the sensation. But even as ye humble porker tires and grows sleepy, so will they who listen merely for the pleasurable emotions excited.

I am not depreciating the value of sentiment. It is a power. I only wish that sentiment may not be the cloak to cover a multitude of musical sins. Remove the cloak and you can discover the sin. Study the hang of the garment with which the musical idea is clothed and you will often find it to be a little haggard hunch-back not worth the trouble of fostering; but more often still, in many of the songs sung, *only a bundle of rags, with coal marks for features*. On the other hand, beautiful music often excuses insignificant, and even vulgar sentiment. Neither of these states should exist. In common parlance, "Every one would feel that a screw was loose" should the words of a doxology be sung to "Yankee Doodle." We would feel the inconsistency and exclaim over the fact, "that music should be a complement to the words and words to music." It is the business of the teacher of music to understand the above mentioned facts and to be able to discriminate both as to kind and degree of musical composition, as much as it is the business of a teacher of literature to discriminate between Carlyle, Zola and Hans Andersen.

For those, however, who are possessed of sentiment, and not music, (I mean music, other than mere physical appreciation) there is nothing that will lead them more quickly to an interest and study of the art, than an acquaintance with those whose lives have been wedded to music, and the effect of such a union upon the world in which they lived. A nearness to, and a study of, those musical heroes and heroines, will reveal the fact that their lives have been useful and beautiful to a marked degree, and a knowledge of familiar effects will generate an interest in their cause. Now I propose showing in this article, how the life of a musical artist

may be made not only the *means* of which we have spoken, but may be made of value in the school-room from both an ethical and didactic standpoint. For this purpose, I have chosen the life of Jenny Lind, as one having characteristics worthy of emulation, and also as a life typical in the world of musical art.

JENNY LIND.

Jenny Lind was born October 6, 1820, in Stockholm, Sweden. Her mother and father were poor, and both had to work all the time, so a home for the baby was found in the country, with very good people. But hard times came, and the little one was placed in an alms house in charge of an old woman who was one of its inmates. "Old Sarah," as she was called, was fearfully short tempered, and was often very cross, locking her charge up in a room all day. Little Jenny would sometimes cry, but was more often happy, for no one can sing and be unhappy; in after years, she wrote that, as a child, "she sang with every step, and every jump her feet made." And her perpetual song was usually addressed to a cat with a blue ribbon around its neck. Her favorite seat with this cat was in a window which looked out on a lively street, and there she sat and sang to it, and the people passing in the street used to hear and wonder, and among others, the maid of a singer who told her mistress that she had never heard such beautiful singing as this little girl sang to her cat. This singer persuaded the mother to take little Jenny to a music master, and when she sang to him, he was moved to tears. He took her to the Royal School but the president would, at first, not listen to the little girl because she was so pale and small and ugly, thinking that nothing good could come from so unpromising a child.

But he was finally persuaded to listen, and he, too, was moved to tears by the wonderful sweetness of her voice; so he and the music master educated her until her nineteenth year. Before she left their school, she had more than repaid them the money they had spent for her education, and had saved a little sum besides. She had learned all that the masters in Stockholm could teach her, and the Queen had made her the court singer, for in all Sweden no one could sing so well as she. But she was not contented, for she knew

that in Paris she could learn to sing still better, so, in 1840, she went there to take lessons of the great singing-master Garcia. Poor girl! she had sung so much in order to make money with which to study that her voice was almost gone, and the great teacher refused to give her lessons. But she did not give up. She still stayed in Paris and after resting her voice for six weeks, went again to Garcia, and this time he consented to teach her.

She studied with him a year, and was so faithful that even Garcia said he was satisfied. During this time she also learned to speak French and Italian, using well every moment until she was ready to begin her career as a great singer. It seems that she was very lonely here and was more than glad to get back to her loved country. She had always been a favorite with the people because of her sweet winning ways, and when she sang, on her return home, everyone who could, came to hear her, and among those who listened were the Queen and all the royal family.

She sang so sweetly, that her fame reached other countries and great sums of money were offered her to go to other lands besides her own. So she went to Berlin in the year 1843, and there sang to the emperor and empress and all the nobles of the land, who were so delighted that they gave her the name of the "Swedish Nightingale." She sang here and in her old home until 1848, when M. Lumme of London offered her \$30,000 if she would come and sing to the people of London for five months. (Just think what a salary for one day.) But that was not all he offered. She was to have a beautiful house, a carriage and horses and two servants during her stay there, and need sing only every other evening. After singing for the English people for a year, she returned to Stockholm and sang to her countrymen for the last time as Jenny Lind. She was now going to the United States, and when the ship in which she sailed started, cannons were fired and the thousands of people who had come to get a glimpse of their beloved "Nightingale" waved their handkerchiefs, and shouted for her to come back to them.

Here is a pretty little letter which she wrote at that time to her old father and mother, who were then living in Pommeru, near Stockholm, in a nice house which Jenny had given them.

“LIVERPOOL, 20th Aug., 1850.

“*My Dear Parents:—*

“May these lines find you in the enjoyment of good health. I have been very well since I left Sweden and am now starting for the New World, for we leave to-morrow morning at half-past two.

“I have been eight days in England, and have sung in two concerts, both of which have been most successful, and the English public have greeted me as if I belonged to them. I am met everywhere with heartiness and love. O may I succeed in deserving them more and more! I have been to see the steamer which will take us over to America, and nothing grander of its kind, I should think, could be found in any country. The vessel is 300 feet by 80 and is decorated so magnificently that one can fancy one's self in a rich private house. I look forward to the sea, the ocean! When I have got across, I shall let you hear again. As my mother wished to have a daguerreotype of my poor features, I have sat for one in London. I hope it will have succeeded.

“Farewell, good mamma and papa! Think of me with friendliness and give me now and then your blessing, for a parent's blessing is something good to travel with.

“Let me hear occasionally how you are at Pommeru. Remember to look into the books which I gave you while stopping with you there and may the Lord Himself enlighten and bless you! Thus prays most sincerely,

“Your attached Daughter.”

When she sang in this country, some of the papers tell us that the people so loved to hear her, that they would applaud until she would sing again and again. They never tired, and when she had more than ever delighted her audience, the people loosed the horses from her carriage as she was going to her room, and drew the carriage themselves. So many people went to hear her that the amount of money she earned was enormous, almost \$5000 every night that she sang. She spent much of this in helping the needy poor and in aiding those who wished to gain an education, never forgetting that she had been helped in this way.

While in this country, she married Mr. Otto Goldsmith, a very fine pianist, and soon after, to the great sorrow of the

American people, left this country, never to return. She lived in England and continued singing in the Old World, many years after her marriage, and died Nov. 2, 1887, mourned by all, but most of all by her good husband and children, who are still living.

The practical educational uses to which this story may be put are many, and the skillful teacher will find many besides the few I shall enumerate. Her journeyings* might be traced and a profitable geography lesson derived therefrom. One or two arithmetical problems for the lower grades may be found.

All who are capable can write the story in the form of a review, thus affording an excellent language lesson.

The letter which is quoted is one peculiarly free and expressive, and in many respects, worthy of study. It would be an interesting outside task, to have the children find out the names of the different rulers to whom she sang, and the ideas of the government, which in the story are but vaguely hinted—strengthened.

As to the ethical side, there is a wealth of meaning in the simple story of a great life. The transition from poverty to wealth, the transformation that was wrought during her period of greatest receptivity, is more marvelous than any fairy tale. Yet we know that no fairy worked the charm. It was only the patient, devoted study, the incredibly hard work of that tiny scrap of a child who once sat in the window of the Widow's Home, and sang away to her cat with a blue ribbon around its neck.

Call it what you may, we will say it was a "still small voice" that whispered to her that she had not performed her duty, until the most had been made of the gift which was hers; and her journey to Paris, through great sacrifice and discouragements shows how well she obeyed the whisper, and her life proved the glorious results of such obedience.

*From Stockholm to Paris, then Stockholm, Dresden, Berlin, Leipzig, Berlin, Aix La Chapelle, Cologne, Hamburg, Darmstadt, Vienna, London, Birmingham, Liverpool, Edinburg, Glasgow, Dublin, Exeter, Oxford, London, Berlin, Hamburg, Stockholm, London, Liverpool, New York, Philadelphia, Boston England. This gives a more definite idea of the extent of her triumphs than could possibly be given in the story.

But the characteristics which have endeared herself and her art to the whole world are those which whenever possessed, make the owner truly great. Her love of home and nature are the keynotes to her character. Where the one exists, there is affection and gratitude; where the other lives there is simplicity. These characteristics, combined with her art, make her name one never to be forgotten. Her love for nature first found its vent in singing to "Pearl" her cat: and as her life enlarged, the birds, trees, and the sunset became to her objects of reverence. Then, when nations were vying with each other in doing her honor, and pouring their wealth at her feet, note the simple almost child-like letter to the loving father and mother, who no doubt were listening with breathless wonder to the echoes of the praise which the great world was bestowing on "their Jenny."

Duty, without thought of sacrifice; perseverance to reach the high ideal of her art, which was ever before her; and success without vain glory, may be the resume of a life which truly exemplifies that "He who is diligent in his business, shall stand before Kings."

AN OUT-DOOR CHRONICLE.

LIZZIE V. NUNEMACHER, NEW ALBANY, IND.

Life and song; color and fragrance: a confusion of charms dwells in field and wood in the midst of spring days, and vies in delighting eye and ear. Look up, and you miss the wild flower at your feet; look down, and you lose the bird above your head. Besides these, the wood, the field, the outdoor, the very fence-posts,—are full of feathered babies. There are cradles at every step, but I have heard no crying.

I had a round of visits to pay to these cradles this morning. At the bluebird's home in the low apple-tree, where four days ago I put my hand in and felt large wings spread out against it, I now found the nest deserted, a new one built a little higher in the same roomy hole, and one white egg laid as promise of another brood.

I passed the brown thrush's nest, deep in the shadow of the Japonica bush; she sat quiet, and I left her undisturbed.

The alarm this bird shows when her nest is approached, rends one's heart, so human, so frantic is her distress and fear for her treasures. At such a time she comes very close to the intruder, while her yellow eye gleams, and a nearer view of her brown-spotted, creamy breast forces one's admiration afresh. A Maryland yellow-throat enlivened a circle about the charmed bush, querying pertly "Which is it? Which is it? Which is it?" with evident reference to the contents of the nest—"eggs or babies?"

An orchard oriole lilted his dancing melody from the top of a sweet-gum tree, where he shone out against the green leaves in the yellow garb of his mother, but had donned the black mask of his father, as a foil. His luscious, fruity voice is like no other, and makes one think of a great juicy black-heart cherry.

Creeping under the fence beyond, a large bird flew directly from about my feet with a startling suddenness apparently mutual. It settled on the ground at a short distance and walked excitedly about, with wings wide-spread, showing the the broad white margin of its tail. It was a meadowlark, and I must have broken his late morning nap, for I found no nest in the vicinity.

Walking under the bridge, to see if the young phoebes had left their mossy bed beneath the rafter, I saw robin strutting about there, with the same commercial swagger he assumes in town. He, too, appeared to be investigating matters, but the young birds had flown, and later I saw one, perched on a limb, looking tousled as only young birds can look, and awkwardly devouring an insect.

Across the field, at the edge of the wood, and set deep in a mass of tangled vine which overhangs the small stream, is the cardinal's nest. Madame Cardinal sat bravely motionless for a long second, under my inspection, but fear overcame her and she sprang from the nest and I bent over to see that there were two naked, featherless, brown skinned birdlings, and one chocolate-spotted egg, the latter standing on end. Can it be that that small, spotted egg encloses a duplicate of those big, bony nestlings? Not far distant the male whistled softly, lest too jubilant a note should betray the source of his happiness, in the shelter of the vine.

A red-eyed vireo preached cheerily many sixthlies, but revealed no domestic possessions near his pulpit. An indigo flashed his small blue body along the bank, his inconspicuous brown mate doubtless following near. A pair of white-eyed vireos, too, were there; he with his saucy, emphatic notes, but they, also, kept their secret closely. A woodpecker flew twice to the ground and seemed to be digging into it with his bill, while his red-plush head looked very odd and out-of-place there.

Deeper in the grove a wood thrush was dropping his lonely, liquid notes in two's and three's, as if he fully appreciated their loveliness, and knew they were too rare to be lavishly uttered. He kept near me, but I never saw him, for as I moved about, he moved, too, and, keeping the green veil between us, continued his song.

Near the haunt of the wood thrush was a group of white-throats, those true darlings among sparrows. They were busily breakfasting in the damp darkness of the ravine, but every now and then, like a faint whispering zephyr, came the first few notes of their incomparable hymn. They formed a group of lovely choristers, breathing notes whose exquisite purity and softness were like snowflakes, and fell as serenely.

Towhee sang in a beech tree, while his brown mate recklessly flirted her only white petticoat among the dead leaves beneath. My respect for this pair has increased since sight of their nest, set in the ground with the firmness of a jewel, under the very root of a clump of willows, 'delicately woven of fine grasses and enshrining four dainty pinkish eggs with reddish-brown spots.

A cat-bird flew into view suddenly, shaking himself, from a morning bath. A summer yellow bird flew furtively down into a very shallow spot, and took a most thorough bath. The water was hardly deep enough, and his efforts to get wet all over were comical. He would lie down on his neck and get the front wet, then tried lying on his sides, one after the other, repeating this again and again, till he was thoroughly dripping, and his feathers took a deeper yellow, when he mounted to a twig and there twisted and turned, preening his feathers, and shaking out his wings and tail, with a suppleness beautiful to see. Next a song sparrow plunged into a

deeper pool and threw the water high over his head and neck, causing his striped coat to look very bright, yet very much tossed and ruffled.

The song sparrow shows a deep rooted suspicion of the intentions of mankind towards himself and family. Returning under the bridge, I saw a pair of song sparrows fly from the ground on the further side. Their peculiar hoarse "chirk" ensued, and they appeared very much interrupted. Then I saw that she had in her bill something very white, which meant that there must be young to feed. It was a moment of tensest suspense; never had I been able to find a song sparrow's nest. I waited; and she waited; and he waited. There was a long pause, then she flew ahead of me for a few yards and down into the half-dry bed of the stream. I watched her approach a tuft of grass at the edge, hesitate, disappear behind it, then suddenly fly back and over my head, but still with the dainty in her bill—she could not trust me. But I had my cue now, and keeping my eyes unswervingly on the tuft of grass, went along and began to inspect the edge of the bank. Lifting a fringe of yellow grass, I found the precious home, set in the extreme edge of the earth, where any one might step on it, and enfolding four much crowded baby song sparrows, each with a very few feathers beginning to appear, and one with eyes open. At the slight noise made by me, all raised their heads and opened yawning bills to be fed, and I hastened away that they might receive the delayed, tell-tale morsel awaiting them.

A BIRD'S CALENDAR.

Suggest to each pupil the plan of keeping a birds' calendar during the coming season. It will be found one of the best ways of whetting the powers of observation; it will have a tendency to create a methodical and systematic system of doing; it will prove as entertaining as instructive; it will arouse in each child an interest in and love for our feathered friends, which will make for the latter life-long protectors.

A small note-book with a column ruled for the date, may be kept for this purpose. A few species, as the crow, blue jay, and some of the woodpecker family remain with us dur-

ing the winter. A few robins are also winter residents, though it is supposed that these are not the individual birds which fill the air with melody later, but immigrants from a more northern clime, while our own summer songsters of this species are enjoying the genial clime of the southern states. The latter return in full force in March, together with the bluebirds and song sparrows. Later come the phoebes, red-winged blackbirds, and a host of others. Meantime the winter residents have most of them retreated northward. The last farewell of each of the latter should also be noted.

The work of nest-building is another interesting subject for observation. Some birds set themselves to work seriously at once; others postpone the matter, evidently looking the ground over thoroughly before choosing a location, or wishing to enjoy life before assuming domestic cares. The time devoted by each to carpenter work forms another interesting subject of discussion. The date when the bird commences to set, time of hatching, and flight of the young birds will also be duly noted. Some birds raise two or even three families in a season. Finally, when the blackbirds are filling the air with their farewells, the industrious pupil will find his notebook pretty well filled with interesting data recalling pleasant memories.—*Educational Gazette*.

A LETTER FROM JENA, GERMANY.

My Dear Mr. Editor:—

Judging from what I saw and heard at a late meeting of the State Teachers' Association, a letter from Jena may not lack interest for your readers. The town is situated in the Thuringian forest, one of the most picturesque regions in all Germany. The scenery around Jena itself is a never-ending source of enjoyment. The ordinary sight-seeing student cannot exhaust its opportunities within a year.

The great cities of Germany are fast becoming like the rest of the world, but Jena is real Germany, at least the Germany of the past. Life in and around it is much what it was in Germany many years ago. Feudalism has left some marks here. Mouldering towers which formed portions of the old "wall" are still standing. A somewhat circular street called

the "graben" once formed the "moat" outside the town. In the tower of the city church lives a watchman and his family whose duty it is to blow a horn every quarter of an hour and announce to the inhabitants that the town is not on fire and no enemy is in sight. This formality in regard to the enemy was once a stern reality as is fully demonstrated by the ruins of the castles of robber knights, which are now found upon the heights above the river.

Jena for generations has been a great intellectual center—a sort of mental power-house for the rest of the world. Fichte, Hegel and Herbart have made her past secure. The great Leibnitz came here to seek instruction from Germany's greatest mathematician of the 17th century. Here, too, the Humboldts and the Schlegels lived and wrought. Schiller tablets are on many houses and a monument in the Schiller garden announces that he and Goethe often held high converse on that spot. Numerous other tablets and monuments tell of other men with fame less universal. But still another famous man—not a German—has left his mark on Jena, Napoleon. On the heights above the town, in 1806, he crushed the military power of Prussia and the allied German states.

But this place is mainly interesting to Americans because here the disciples of Herbart are made. Prof. William Rein, his lectures, Seminary and Practice School constitute the "plant." Women are admitted to the seminary and to observation and teaching in the practice school. The plan of the latter is much like that of the training department of the ordinary American normal school, with the important exception that there is a close connection between the educational ideas presented in the lectures and seminary and the course of study and the methods of work in the practice school. One does not find Hegel in the theoretical work and Herbart in the practice work. This advantage of keeping theory and practice together might be introduced into America without much loss of life or property.

The practice school held the closing exercises of the winter semester under some conditions peculiar to Germany. The boys who alone compose the school as individuals and as classes said their "pieces" and sang their songs in the same interesting way that school boys are supposed to do a

over the world. Two or three characteristics were noted that have not yet been introduced into America, even by the most enthusiastic Herbartians. One of the boys, age fourteen, was the object of many hearty congratulations by the teachers, parents and pupils. He was ready to be confirmed at Easter and this meant for him readiness to enter upon life's duties. He graduated. More peculiar still is the fact that these exercises were held on Sunday afternoon, but stranger still was the place where the exercises occurred—a beer hall! A portion of this room was occupied by parents grouped around tables on which mugs of beer were served whose contents seemed to stimulate interest in the occasion. This last is not an unusual accompaniment of educational gatherings in Germany.

A few days later I attended the annual meeting of the Herbartians of Thuringia at Erfurt, where the audience again grouped itself around tables on which beer, coffee or other drinks were served while the discussion raged over some great ethical problem. The question was opened by a minister and the flow of interest was not at all disturbed by these surroundings. Last year but one woman was present at the annual meeting, but this year the number increased to five, exclusive of the American women present. You can understand how the Germans are not disturbed when holding educational conventions in such surroundings, if they see no inharmony in holding a temperance meeting in a beer hall and have as the chief orator of the day a prominent brewer.

There are now between twenty-five and thirty Americans in Jena, most of them studying pedagogy and philosophy. Although nearly all the progressive nations are represented, yet, aside from Germany, America is in the majority. It is also a matter of some significance that a large majority of these are from the two great pedagogical "storm-centers" of America—Indiana and Illinois. An American Club is one of the features of student life in Jena. It is organized for business, excludes beer and admits women and Englishmen. One evening on "apperception," two on "concentration," two on the "five formal steps" and one on "the culture epochs" may indicate the line of work for the past six weeks. Questions less pedagogical will soon absorb the attention of the club, I

may add that the members of this club and the entire pedagogical seminar are deeply interested spectators of the pedagogical battle raging in America between the Herbartians and their critics. The reason for this lies in the fact that America presents the best conditions among nations for the growth of a rational pedagogy.

May 1, 1896.

Very truly,
W. H. MACE.

COMMENTS ON THE TEMPEST.

JONATHAN RIGDON, DANVILLE, IND.

The third act opens with a love scene, the wooing of Ferdinand and Miranda. Here Miranda appears as a perfect symbol of nature untouched by art. She is ignorant of deception, has never learned how to hide her feelings. Out from her plain and holy innocence comes her heartfelt sentiment:

"I am your wife, if you will marry me;
If not, I'll die your maid: to be your fellow
You may deny me; but I'll be your servant,
Whether you will or no."

Viewing this wooing scene from Ferdinand's standpoint, we get some practical life lessons. He is setting out to win the loveliest creature he has ever seen, one that—

"So perfect and so peerless, is created
Of every creature's best."

But to do it he is compelled to toil and toil, king though he is, at the basest of drudgery, so distasteful to him that were it not for the thought of his prize he would no more endure

"That wooden slavery than to suffer
The flesh-fly blow his mouth."

But Ferdinand had the good sense to know that "most poor matters point to rich ends." The lesson for us is that all prizes worth the winning are to be won by labor. The treasures of nature and the gems of art are not to be had for the asking. How many of us are *merely waiting* for a prize—wealth, fame, an education, a better position, success in business, distinction in some profession—to *drop* down upon us. This, the poet here teaches us through art, is not the way of nature. Obstacles are everywhere. Whoever would achieve

anything worth while "must remove some thousands of these logs, and pile them up, upon a sore injunction." He must work with a constant purpose that he may say with Ferdinand—

"The mistress which I serve quickens what's dead,
And makes my labors, pleasures."

The second scene again introduces us to the lowest group of characters. Here we have suggested to us the universality of the desire to rule. The drunken Stephano has already consented to kill Prospero, who is now king of the island, in order that he himself may be king on it. In imagination Stephano makes himself king, and transforms the monster into a servant and Trinculo into a lord. "Servant-monster, drink to me. Drink when I bid thee." Again he says to Caliban who has just made a request, "kneel and repeat it; I will stand and so shall Trinculo."

* * * * *

"Monster, I will kill this man: his daughter and I will be king and queen—save our Graces!—and Trinculo and thyself shall be viceroys."

In telling Stephano how he may kill Prospero, Caliban shows that he thoroughly understands the source of Prospero's power and art.

"There thou mayest brain him,
Having first seized his books;

* * * * *

Remember

First to possess his books; for without them
He's but a sot, as I am, nor hath not
One spirit to command: they all do hate him
As rootedly as I. Burn but his books."

In the third scene of this act the retribution begins. Alonzo, Antonio and Sebastian, all hungry, happen upon a table spread with luxuries most tempting to their appetites, but just as they are ready to partake of the food, Ariel in the form of a harpy lights upon the table, causes the banquet to vanish, and thus addresses Alonzo, Antonio and Sebastian:—

"You are three men of sin, whom Destiny—
That hath to instrument this lower world
And what is in't—the never-surfeited sea
Hath caused to belch up you; and on this island,
Where man doth not inhabit—you 'mongst men
Being most unfit to live.

* * * * *

I and my fellows
Are ministers of Fate.

* * * * *

But remember—

For that's my business to you—that you three
From Milan did supplant good Prospero;
Exposed unto the sea, which hath requit it,
Him and his innocent child: for which foul deed
The powers, delaying, not forgetting, have
Incensed the seas and shores, yea, all the creatures,
Against your peace. Thee of thy son, Alonzo,
They have bereft; and do pronounce by me:
Lingering perdition—worse than any death
Can be at once—shall step by step attend
You and your ways; whose wraths to guard you from—
Which here, in this most desolate isle, else falls
Upon your heads—is nothing but heart-sorrow
And a clear life ensuing."

At this Alonzo exclaims:—

"O, it is monstrous, monstrous.
Methought the billows spoke, and told me of it;
The winds did sing it to me; and the thunder,
That deep and dreadful organ-pipe, pronounced
The name of Prospero."

UNIFORM COURSE OF STUDY--SEVENTH AND EIGHTH YEARS.

R. A. OGG, GREENCASTLE.

It is generally conceded that the work of the seventh and eighth years does not need so particular outlining as that of the lower grades. Perhaps the idea is not well founded and that there should be more of definite purpose put into the work of these grades than is usual. It is quite certain that pupils need the most careful and purposeful training in strong and original thinking to fit them for the work of the high school and that teachers of breadth, of scholarship and power to stimulate thought should have charge of these grades. It will not do to give pupils the forms of thought when what they really need is power to think. They ought now to be able to find the real significance of events in history, the real beauty in literature, the true teachings of science and to put all they have to say on these subjects in good English. The history of the seventh year covers the revolution and the administration to 1817.

The work on the Revolution is designed to be intensive —

far as pupils are prepared to do such work and teachers should read carefully all they can find upon the purpose and method of intensive study of a subject. That pupils may do this properly there must be at their disposal a good selection of books upon the period, and some of them should enter into the details. Teachers should direct their reading so as to make it educative because it is purposeful. They should trace on a map and follow out in the particulars, the campaigns in various parts of the country. The movements of an army should in the end stand in memory as a connected whole. But the significance of events will not be seen unless those related in time be brought into unity as well as those in sequence. It need hardly be said that there will be no good teaching unless a good map is constantly in use and that each pupil should make a map of his own. Following this, the articles of confederation should be carefully read and studied, the points of their weakness pointed out as shown in the difficulties encountered by the new government and the steps looking to a stronger government. In connection with the adoption of the constitution, the two fundamental ideas of centralization and decentralization in government and the danger in the extreme in either, should be clearly shown.

The geography work on Asia, Africa, Australia and the island world does not contemplate the close study given to America and Europe, because there is not the same historical interest. It is unnecessary to learn the insignificant places, rivers, bays, etc. The interest will center in the civilizations found; and the character of the people, their mode of living, etc., should be prominent.

The literature in part is related to the history as the report indicates. "The Great Stone Face" has a very fine ethical teaching and the teacher should not fail to lead pupils to find it. But she should also make much of the beauty of style, that pupils may learn to enjoy literature as such. "Ulysses among the Phæacians" may seem unsuited to this age of pupils. But those who have tested the matter have been surprised at the avidity with which pupils seize upon it and the correctness of the pictures of the old oriental life they form. It becomes the foundation for an intelligent reading of the Illiad and Odyssey.

Teachers should make a special effort to make their teachings in botany and physiology effective. For a year or two this will not be possible in the highest degree, because the previous work planned in the course has not been done in full. What is done should be done well, as some will not go on into high school and should be sent out with eyes wide open and mind alert for the lessons of nature. The gap between the good science teaching in the primary grades and in high school should be filled.

In the eighth year the history work is so fully suggested that it probably needs no further discussion here, except to say that it will be a mistake to study the period of civil war particularly. The events are too complex, the philosophy too obscure, the feelings too easily aroused, to permit of any proper study of the period. The cause of the war as found in the study of the preceding forty years should be carefully presented, the leading events and persons should be in mind as a matter of knowledge, but any study such as would appeal to sectional or personal feeling, would be a real wrong done. So, too, the period following should be studied in the light of progress in the arts, sciences, etc., but with little reference to events having a political bearing.

The science work is upon the forces of nature as seen in physical science and should employ illustrative experiments to as large a degree as possible. And these will not be as difficult to provide as may at first appear. In many cases the science teacher in high school may be called upon either to supply the apparatus or to perform the experiments. Intelligent discussion of these on the part of pupils should always be secured.

The introduction of concrete geometry and algebra will call upon teachers to fit themselves for this new work. The former will make the teaching of mensuration far more pleasing and valuable. There are several books published upon the subject which will make clear how this can be done. Simple algebra will not be as hard for pupils to take up as given in some new books prepared for the purpose as is algebra in high school, as we are accustomed to have it, and teachers can easily secure good results if they first of all prepare themselves for it.

This closes the series of articles upon the course of study as prepared by the committee. They have been written for the purpose of aiding teachers to see the aim in the course and the means of securing it, as also a means of presenting such suggestions as might be offered by those who saw defects in the course as printed. It has been a surprise that no criticisms have been received. If there be any it is desirable that they be made, that the committee may be able to consider them before making its final report next fall when the superintendents' association meets.

PRIMARY DEPARTMENT.

Edited by MRS. SARAH E. TARNEY-CAMPBELL, Supervisor of Instruction in the Anderson Schools.

THE MAY READING EXAMINATION.

"There are many good things from which I might have derived good, by which I have not profited, I dare say, Christmas among the rest. But I am sure I have always thought of Christmas time, when it has come around—apart from the veneration due to its sacred origin, if anything belonging to it can be apart from that—as a good time; a kind, forgiving, charitable, pleasant time; the only time I know of, in the long calendar of the year, when men and women seem by one consent to open their hearts freely and to think of people below them as if they really were fellow-travelers to the grave, and not another race of creatures bound on other journeys."—*Charles Dickens.*

1. From which one of Dickens's writings is the above taken? How does it compare in point of literary merit with his other productions?

2. State what you believe to have been his purpose in its writing.

3. The delineation of which of its characters leaves the deepest impression on the youthful readers?

4. Do you believe it to be well to have pupils read the story entire? Why?

5. What others of Dickens's works would you recommend as suitable for young people's reading courses?

This was the test in reading in the May examination.

Several teachers' manuscripts lie here before me as I write. Some of them have omitted the reading questions entirely hoping that as lightning is said not to strike twice in the same place that at some later time there might be a possibility at least that they could make more than 20 per cent. on a set of questions in reading.

Two applicants stated very frankly that while they had read several of Dickens's novels they did not recall this particular passage, so they could do nothing except with the last question and at best make a grade of only 20 per cent. One of these young women I know to be an excellent teacher and the reading work she does in her school compares very favorably indeed with that of other good teachers. But according to this test, she is so low, so very low, that it is utterly out of the question to give her a license. She failed in reading—got the ridiculously low grade of 20 per cent.

Now what is to be done with this particular successful teacher who has made a good grade in her other subjects? She has read several but not all of Dickens's works, but does not remember this particular passage. She is unable therefore to answer the first four questions. According to the "rules and regulations," this is what is virtually said to her: "You are not qualified to teach in the common schools of this country because out of all the volumes Charles Dickens wrote you cannot state in which of his many productions a certain paragraph of a dozen or fifteen lines occurs." There is little doubt if the applicant could state in which one this passage occurs that he could answer the questions.

However it may be the purpose of this reading examination to stimulate the teachers to do a great deal more general reading; to lead them to a wider acquaintance with good English literature. This is exactly what our teachers need and probably we ought to welcome any means that will help to bring about this end. But instead of having this effect upon the mass of common school teachers whose books and opportunities are much fewer than many of us think, it is exactly the opposite. It discourages them.

I do not mean we should put an examination on so low a plane that even the poorest applicant cannot fail. Neither do I think the test should be such that good teachers, with

successful experience and having done at least a fair share of general reading, would in many cases be hopelessly lost in the test. While doubtless these examinations should have for a partial end the purpose of inspiring teachers to do more of this general culture work, it seems to me we should not lose sight of the fact that the examination should also be a test and be put in such a way that the estimate of a teacher's culture and ability may be at least approximately given. If this is a wrong view of teachers' examinations, I shall be very glad indeed to see the subject from the right standpoint.

LUCY GRAY.—INDIANA FOURTH READER.

There is always a little difficulty with just such poems as Lucy Gray. There are two classes of people each taking its own views of everything that belongs to literature. One class looks at a piece of literature exactly as they would look at the description of the State House at Indianapolis or of the maple tree in their front yards. They see a selection as applying only to the definite object described and insist that it cannot apply to any other. I think we all admit that a description of Westminster Abbey, or of the statue in New York Harbor would apply only to these two things.

The other class is made up of those who see in literature something more than they saw in the description of the particular object, who feel that Shakespeare's Hamlet, Julius Cæsar and Macbeth were more than mere copies of individual human beings. Not long since I heard Hamlet characterized as all humanity putting a question mark before existence; Brutus was summed up as the entire Roman Empire centered in one man, and Shylock was the embodiment of the entire Jewish race. No one except a poet or a philosopher or one with their insight, at least, can see in Shakespeare's plays this universal element, but I hardly think it is just to say it is not there because some of us do not see it.

As to this poem of Wordsworth's, whether he had in mind a definite child called Lucy Gray, who was lost on that winter night and who from the story seems to have been drowned in the brook, I am sure I cannot say. That is certainly all in the selection; but to my mind he is the better interpreter who

sees in the Lucy Gray in the poem a type of childhood and youth wandering away from home and losing herself in the pitfalls of society. The anguish of the particular father and mother, in the poem, who search all night long for the child, is certainly no greater than the anguish of any parent whose child at the present time may have gone astray in any one of the thousand ways we know so well. I sometimes think that the value of poetry and literature is not in simply what the author puts into the selection, but it consists in what we are able to get out of it. And if we are able to interpret the poem in such a way that we will see the Lucy Grays around us, the dangerous streams they have to cross, the bridges with the broken planks before them, I believe we make ourselves better interpreters of literature and therefore better members of society.

Of course, I understand it would be pretty hard to justify all this from the poem, and yet I wonder a little if Wordsworth himself did not have some such notion when he said:

"Yet some maintain that to this day
She is a living child;
That you may see sweet Lucy Gray
Upon the lonesome wild."

If Wordsworth had been asked to explain clearly what he meant by "lonesome wild," I doubt very much if he would have given a description of the country surroundings of the child in this poem. There are wilds in human life more dreadful than the wild on which this child was lost, and the true poet is the one who through these common things tries to draw our attention to something more fundamental in human life and human character, than tracks of ground, broken bridges and snow storms.

Of course this is only my opinion on this poem and it does not settle anything. Each one after all must interpret for himself. Appreciation of literature is like religion, he who hasn't it doesn't know anything about it, and is thereby disqualified from urging anything against it.

RESULTS OF THE YEAR'S WORK.

In the first place, these results cannot be measured. Any teacher who looks back regretfully at the low grades, the poor averages and who is half inclined to think that, after :

these are a test of her work, this teacher should remember she began the year with higher ideals than this. She fondly hoped to instill better ideas of play, stronger respect for work, a true consideration of the rights of others, of sympathy, honesty and honor. How many of these are indicated on the report card? Not one, unless it is included in that all comprehensive notion "deportment."

I have in mind a building in which the general behavior was so bad that only a man could possibly manage it. But this year a woman was made principal of that building. This principal and her corps of assistants were teachers, not simply because they could pass satisfactorily a stated examination, but because they had the most earnest desire to help the children with whom they expected to live for the entire year. These teachers went to the birthday parties of their pupils to which they were invited; the children were invited home with the teachers; they went together for tramps in the woods.

The children all looked upon the principal as a special friend. Every evening as they filed out of the building she stood at the door and had a smile and happy good night for all of them. She was usually in the hall in the morning when they came in, and she always spoke to each one and soon came to know the names of most of them. The children came to her with their surprises and secrets; their troubles and their joys. The principal was never too busy to listen, help and encourage.

One of those transformations which sometimes occur has come over this school. From a hooting, lawless, profane, disorderly school, they have developed into an orderly, quiet, peaceable body. This indefinable something shows itself in a number of ways from the touch of the ragged cap to stepping aside and excusing himself of some little barefooted American, Swede or Polander. Each child has come to assume a general air of responsibility for the good order and good work of the building. No dragnet of examination is fine enough to catch, hold and label with a per cent. the true education that has transformed these children.

Mr. Tompkins has put all this so well. "The perishable alone can be tested by the ordinary processes, and it is

scarcely worth the testing. For the other there is only the joy of doing and thinking and living. It is faith in work that yields no tangible product that saves the school; it is the sceptical and materialistic grasping for definitely rounded products that prompt the deadening, mechanical routine of the school room, yielding those definite facts so much prized by those who have none other but an arithmetical measure for the soul's growth."

LEND A HAND.

(This department is conducted by Mrs. E. E. OLCOTT.)

"Look up and not down
Look forward and not back
Look out and not in;
Lend a hand."

VACATION.

"What shall you do this summer?"
"Nothing!" I staunchly said;
"Neither books, nor Chatauqua nor Concord,
Shall claim my tired head.
"I shall lie at length in the sunlight
And count the pine tree plumes,
And fill my senses with silence
And the odor of clover blooms.
"I shall stand and stare, like the cattle,
At the rim of the earth and sky,
Or sit in the lengthening shadows
And see the sweet days die.
"I shall watch the leaping squirrels,
And the patient creeping ants,
And learn the ways of the wee wood-folk
In their unmolested haunts.
"And perchance in the hush that follows
The struggle to be wise,
Some Truth that was coy before time,
May take me by surprise!"

—H. R. Elliott in *The Youth's Companion*.

AN OLD-TIME FAIRY TALE.

Midsummer, just between June, when school work is laid aside, and August when county institutes recall thoughts of work to begin in September, drowsily whispers to the editor of Lend A Hand. It says: "In July, even the most pertinent suggestions as to ways and means, devices and methods

teaching 'the three R's' or any of their nearest kin, are likely to be dismissed with a glance at the title!"

So I choose to re-tell a fairy tale, hoping that, swinging in some hammock or sitting in some shady nook, you may be tempted to read it, and may recall it in some time of need.

Some day when it is very hot or severely cold, and pupils are drowsy or restless, and unresponsive, remember this story. Give the pupils a brief, brisk exercise in calisthenics that quickens the breath, and brings a glow to the cheek and sparkle to the eye, then quiet them by telling the adventures of Puss-in-Boots, and, my word for it, they will turn to their lessons with a will, and you will be glad you read the story in July.

I have chosen this tale—I hope it is not heresy to own it—chiefly because it is a favorite with children. I commend myth stories and race stories and stories culled from history or biography; they have an important mission to fill. But, sometimes, I like to tell a story as I would give a cookie to a child.

Grave charges of unwholesomeness may be brought against the cookie, and unanswerable arguments cited in favor of wholesome, nourishing Graham bread. Yet—alas for the child to whom cookies are wholly denied!

Must we always analyze our intuitions, and label each aim with its grave pedagogical purpose?

However, I can give "reasons" in numbered array for the selection.

1. Children love Puss-in-Boots. I give it to them as I would a doughnut. I might ask them to pay for the doughnut by telling me what it is made of, and where the sugar, flour, etc., came from; and, likewise, I might ask them to pay for the story by re-telling or re-writing it, or illustrating it with drawings. I do have stories—language-work stories—paid for in just the ways mentioned, but it happens that this tale belongs to the reserve fund, to which no hint of a lesson is attached. I tell it to them as a fond mother would to her little brood on a rainy day.

2. For the sake of those who feel they can never afford the time for a story that is not classical, historical, biographical, or mythical, I will mention that Puss-in-Boots is a folk-lore

tale. The "Readers' Handbook" (Brewer) mentions it, and states that it was translated from Italian into French in 1585; appeared in English in 1697; and was reproduced by a German novelist in 1795. So it may boast of a history.

3. Some of the readers of the JOURNAL who knew Puss-in-Boots in their childhood may be glad of an opportunity to refresh their memory, for the sake of their pupils.

I give the story as I tell it to the children, parenthetical preface included. There are many modifications of the version that I read.

PUSS-IN-BOOTS.

Once upon a time, in a far country, there lived a miller who had three sons. On his death bed, the miller called his three sons and said: "I wish you to live together in peace and love when I am gone, so I will divide my property among you that you may not dispute over it hereafter. All that I have in the world is my good old mill, my strong young mule, and my faithful cat.

"To my eldest son, I give the mill, to my second son, the mule, and to my youngest boy, I leave my beloved cat. Use well your inheritance and to each it shall bring a blessing." Then the old miller closed his eyes and his spirit passed away.

After the funeral, the youngest son sat sadly stroking his cat as it purred on his knee. Looking into its beautiful yellow eyes, he said: "Puss what is to become of us? The mill will make my eldest brother rich; the mule will earn a living for my other brother; but you, though you are the handsomest cat in the kingdom, can do nothing for me."

Then the cat stopped purring and spoke! It said: "My dear master, if you will do as I tell you, I will make you richer than if you owned both mill and mule. You have always been gentle and kind to me and to every living creature and you shall be rewarded a hundredfold. All that I ask is that you buy me a pair of boots, and obey my every command."

His master was, for a moment, speechless with astonishment, then gasped: "Why do *you* want *boots*?"

"To protect my feet, of course," replied Puss, adding warningly, "I can do nothing if you do not obey me."

So his master went to a shoemaker and ordered for Puss,

the softest, finest pair of boots that could be made. It took every penny he had to pay for them, and the shoemaker and everybody else thought him crazy. His brothers declared: "We meant to hire our youngest brother, but since he is so foolish about that cat, he may starve for all we care." So you see he was in a sad plight.

Puss was delighted with his boots. He put them on and said: "Now bring me a large bag, with a long, strong draw-string to close it tight." When it was brought, Puss flung it over his shoulder and disappeared. He went to the fields of a fierce ogre. He made a trap by hanging the open mouth of the bag upon a forked stick, and sprinkling wheat inside. Then holding the long draw-string, he hid himself. Soon some fine, plump partridges crept into the bag for the wheat. Puss jerked the string and had them fast.

He flung the bag over his shoulder, hastened away, and soon knocked at the king's gate. When it was opened he said in a clear voice: "My master, the Marquis de Carabas, sends me to the king."

The warden of the gate was so astonished to hear a cat speak, that he conducted Puss, at once, into the presence of the king. Puss bowed so low that the tips of his ears touched the toes of his boots; he laid the partridges at the king's feet, and humbly said: "My master, the Marquis de Carabas, begs you to receive this small gift, and wishes you a long life and many jewels in your crown." The king was pleased to accept the gift and said: "I should like to see the master of so wonderful a cat."

But Puss bowing low, replied: "My master's heart is yours, but he is far too modest to stand before your royal Highness," and then disappeared.

The next day, Puss set his trap again in the fields of the ogre. This time he baited it with fresh cabbage leaves, and some fine rabbits crept in. He jerked the string and held them fast. Then away he went to the king's palace, and, as before, presented them in the name of the Marquis de Carabas.

The king was pleased to accept the gift, and once more wished to see his master. But Puss, bowing so low, the tips of his ears touched the toes of his boots, again said: "My

master's heart is yours, but he is too modest to stand before your royal Highness," and again he disappeared.

On the third morning, Puss appeared with the most perfect fruits from the top-most boughs.

On the fourth morning, he brought delicious grapes, such as the king had never before tasted. They grew on a rare vine that hung over the ogre's window and no man in the kingdom dared touch them. Some had said they were sour grapes, but none knew their flavor till Puss-in-Boots laid them at the feet of the king.

Each day, Puss had bowed till the tips of his ears touched the toes of his boots, and had said: "My master, the Marquis de Carabas, begs you will accept this small gift, and wishes you a long life and many jewels in your crown." And when the king had accepted the gift, Puss disappeared.

On the fifth morning, Puss come with a bag of the finest wheat that ever was seen, and humbly said: "My master, the Marquis de Carabas, begs you will accept this grain and if it pleases you, the whole of the harvest is at your service."

The king gazed at the grain with delight, but said, "I shall not accept so great a gift unless I may see the Marquis de Carabas." Then Puss stood on his head, waved his boots in the air, and as he disappeared said: "To-morrow! To-morrow!"

Now it was the custom of the king to greet the rising sun from the brow of Sunrise Hill. Thither, each morn, he rode in his gilded chariot, and always with him, was his lovely daughter, the heiress of the crown. The road to Sunrise Hill wound round a beautiful lake.

At the break of day, Puss roused his master, saying, "Come with me."

When they reached the shore of the lake, Puss said, "Plunge in for a bath, and I will hide your clothes."

"Hide my clothes!" exclaimed his master.

"Obey me," commanded Puss in great excitement. So he plunged in the lake.

Hardly had Puss hidden the clothes under a stone, when there came the sound of wheels. Puss ran to meet the chariot waving his paws frantically, and crying out, "Rob-

bers! Robbers! Help! Villians have robbed my master, they have stolen all of his clothes!"

The king was greatly interested. He ordered soldiers to search for the robbers, and sent a servant back to the palace to bring clothes from his own wardrobe for the Marquis de Carabas.

When Puss's master appeared dressed in such rich garments, he looked every inch a prince. Even the king admired him greatly, while the princess thought him the handsomest man she had ever beheld. She was so beautiful that the Marquis de Carabas was willing to die for love of her.

When his master had accepted the invitation to ride in the chariot, Puss bowed low and said to the king: "May I beg you to ride on till you overtake me? My master is too modest to speak of his wealth." Without waiting for a reply, Puss disappeared down the king's highway, and the royal chariot followed.

Puss first came to great fields of yellow wheat. Of the chief reaper he demanded: "Whose wheat is this?" When the man replied: "It belongs to the ogre," Puss ran out his long, sharp claws, looked fierce and growled out this threat: "When the king comes by, if you don't fall on your knees and say all belongs to the Marquis de Carabas, I'll chop you fine as mince meat." The chief reaper was so terrified that he promised solemnly. Then Puss went on into rich pastures where great herds of cattle were grazing. Of the chief herder, he demanded: "Whose cattle are these?" When the man replied: "They belong to the ogre," Puss ran out his long sharp claws, looked fierce, and growled out this threat: "When the king comes by, if you don't fall on your knees, and say all belong to the Marquis de Carabas, I'll chop you fine as mince meat." And the chief herder was so terrified that he promised solemnly.

Then Puss went on through fine orchards and vineyards and gardens, and in each he compelled the terrified laborers to solemnly promise to tell the king that all belonged to his master.

At length, he came to the ogre's beautiful castle. Bravely Puss asked to see the ogre himself. He was sent to wait in the great banqueting hall. When the ogre came in, he looked

so cruel and cross that Puss trembled in his boots. But he bowed so low, and said in a meek voice: "Great and powerful ogre, I have heard so much of the wonderful things you do, that I have come from a far country to see you. Of course it can't be true, but I have been told that you can change yourself into a lion or —" a great shaggy lion stood in the ogre's tracks before he could finish the sentence.

Puss was so wild with fear, that he jumped out of his boots, scrambled up to the window and almost fell out. He might have run to the end of the world, had he not heard the ogre laugh and turned to see him shaking with mirth at the fright he had given Puss. Then Puss came back and crept into his boots. The ogre smiled a broad smile, and his mouth reminded Puss of the mouth of an alligator.

Puss put his paw on his heart and said: "Great and powerful ogre, that was truly wonderful. You are a great ogre, and that was a great lion, but it can't be possible that you can change yourself into a tiny mouse." Instantly a little mouse played upon the floor. In a twinkling Puss pounced upon it, killed and ate it.

Then he called all the servants of the castle, and commanded them to prepare a banquet for their new master, the Marquis de Carabas, and his royal guests, and they flew to do his bidding.

The royal chariot had followed after Puss-in-Boots, and as it rolled through wheat fields, pastures, orchards, vineyards and gardens, the laborers had fallen on their knees and answered, "All belongs to the Marquis de Carabas," as Puss had bidden them.

When the chariot arrived at the castle gate, there was Puss-in-Boots, bowing low, and inviting them to the banquet.

When they had feasted, Puss bowed three times, so low that the tips of his ears touched the toes of his boots, and thus addressed the king: "Gracious Majesty, you have this day seen the great wealth of my master. All that he has shall be at your command if you will accept him as the husband of the princess.

The king was pleased to accept the terms, the princess and the Marquis de Carabas were blissfully happy, and all felt the cup of joy was full to the brim.

As for Puss-in-Boots, no cat in the world was so famous as he, and the memorial tablet in the royal palace says of him:

"He lived in peace,
He died in grease,
And was buried under the mantel piece."

DEPARTMENT OF PEDAGOGY.

Conducted by **ARNOLD TOMPKINS**, Chair of Pedagogy, University of Illinois, at Champaign.]

THE COMPLEMENTARY ASPECTS OF EDUCATION.

Self-activity is an ultimate principle of education. In fact this is the ultimate principle of the universe, and of every living thing contained therein. The individual to be educated is the self-conscious form of this principle; for he may consciously determine his own life. And since he may, he is held responsible for doing so. In an important sense every man is a self-made man.

Every person too, is a modifying cause in the world about him. This follows from the preceding. Man forms his life in and through his environment, and to do so he must modify that environment. His free self-activity lays hold upon, and actively and purposely appropriates, the world of life and thought about him. It is a fundamental instinct of man, and the source of a worthy ambition, to make himself felt to the limit of his surroundings. The love of power, and the desire for universal recognition spring from the root of self-activity. The difference between a Gladstone and an ordinary person is clearly indicated by the extent to which each had made himself felt in the life of the world.

The self-conscious knower is the only real causative agent known to man—causative in the sense of having the power of origination. All other so-called causes are mechanical; only transferring mediums of an ultimate energy. Hence Fichte and Hegel seem right in regarding the self-conscious knower as the ultimate fact, to which all others are relative. Certainly all educational practice must square itself with the principle of self-conscious, purposive activity. That teaching is best which pays most regard to the pupil's self-activity. The work that can be done is to teach the pupil as if he were merely a passive recipient of the truth, rather than a creator of knowledge. All formal and memoriter work, which receives universal condemnation, the only real error in education, simply ignores the right of the individual as an individual. Every detail of instruction is tested by the degree of self-activity which it arouses. The value of a lesson is not

measured by what a pupil receives, but by the thinking done. A question is good or bad depending on the effort which it stimulates on the part of the pupil; and whether the teacher should talk to the class or get them to talk to him depends on the greater effort one arouses over that of the other. The value of the whole school course is measured by the self-determining energy which it quickens in the pupil. Dr. Harris has championed this principle throughout his educational philosophy; and Prof. Sandison has carried it out rigidly in practice in the State Normal School. This is decidedly the controlling principle running through both the theory and practice of the latter.

Correlative to this great principle, we must grasp another before we have the truth in all its fullness. There is a large class of thinkers who consider man as shaped by heredity and environment. The doctrine of evolution, as given us by Darwin and Spencer, shows the shaping influence of the environment over the individual. No one can question the validity of the truth they present; but there is a serious question whether it is the whole truth. They do well in emphasizing environment; but there is also a determining agency in that which is environed. Man out of environment is nothing. Even isolated from his fellow man, he does not develop. If there were no thought and reason in the world constantly appealing to man, his self active spirit would remain dormant. In fact, man is educated—stating it now from the other side—just in proportion as the thought and spirit of the world find their way into his life. Universal intelligence illumines the individual mind. All are familiar with Dr. Harris's figure of the five windows of the soul; by which he recognizes the inflowing spirit of the world into the individual.

In Emerson's "Self-reliance," we have a masterful presentation of the principle of self-activity; but in his "Oversoul" he reverses the view and presents the individual as the passive bearer of a divine life in which he lives and moves and has his being. Man is merely the faithful witness of the divine life whence he emanates. He is now not the center and ultimate fact of existence, but is centered and derivative. These two essays of Emerson, neither alone but taken in their organic unity, present the fundamental principle in its

entirety. Man is self-active in response to the truth of the universe; and there is a self-activity to which he is passive. Just as man is an object to himself—passive to his own self-activity—and active against his own passivity, so he is both passive and active in relation to the world about him. The ego includes both subject and object; it is both thing and environment. It is nothing except in and through that which acts upon it; and is nothing except in and through its relation on the other about it. Man is neither side of this relation alone, but both sides at once. He is both this and the other; he goes forth and returns to himself; he moves in a circle, or, rather a spiral. The two great schools of thinkers for all ages are determined by the point of the circle from which they take their bearings. The self-active individual, the free causative agent modifying the world in which he is placed, and the power of environment shaping the plastic individual are halves of one whole; and determine the two complimentary aspects of education.

This is fully illustrated by the emphasis given to knowledge on the one hand and discipline on the other. This distinction pervades the whole structure of education. Some emphasize one and some the other. Some think that subject matter is only a means to cause the student to put forth effort; that the knowledge gained is chiefly incidental to the training, to the development of faculty. Others see the chief end in acquisition; regard the mind as a store-house of information. Some subjects have always been regarded as exceptionally good for discipline; while others serve best the purposes of knowledge. The one may reduce man to a means to the end of knowledge; the other makes knowledge a means to the discipline of man.

Of course the truth lies in the organic unity of these two views. The effort of the individual should not be mere effort, but fruit-bearing effort; just as busy work is not merely for the sake of keeping pupils busy, but busy in the achievement of some worthy object. A subject which does no more than call forth effort, if such were possible, on the part of the pupil should find no place in the course; and a subject that gives merely information, if such were possible, without stimulating self-activity on the part of the student, should likewise

be rejected. Other things equal, the more fully a subject challenges the self-activity of the student the better; and, too, other things equal, the greater the scope, the outlook, the illumination given by a subject the better. A subject is valuable according to the breadth and depth of view disclosed; and such a subject is the one which stimulates and arouses the mental life of the pupil. Receptivity is in proportion to activity; man acts to receive, there is the outgoing and the incoming.

It is idle to try to divorce knowledge and discipline; or to emphasize one more than the other. The process and the product of knowing are equal; each is the other. Whatever education is best for knowledge is also best for discipline; and whatever is best for discipline is best for knowledge. If the study of Latin and Greek does not illuminate the mind and give fuller touch with the environment which is to re-act on the individual, then their claim to the merit of discipline is without foundation. And if the studies of science and history do not arouse, stimulate and discipline the individual they can have no claim to merit as knowledge giving subjects. There can be no genuine self-activity—disciplinary activity—except in reaction against a self-active environment, of which knowledge is to be gained. Knowledge—truth—express the fact of unity of action between the individual and his environment. Both discipline and knowledge have reference to the scope and power of individual activity.

Hence the educational value of a subject may be accurately measured from either standpoint. That subject has the greatest value which arouses most fully the whole energy of the student's being, or, that subject has the greatest value which brings the environment into the fullest touch with the individual—gives the broadest outlook into the world of reality—gives the most knowledge. The recent movement to enrich the course of study is also a movement to secure a finer discipline. Only fruitful activity is disciplinary activity; and if variety and wealth of subject-matter are necessary to furnish and expand the mind, they are also necessary to give it tone and fiber. There are those who worship knowledge and those who worship discipline. Neither will go wrong or be in conflict with the other, provided they clir

to true knowledge or true discipline. To be safe each must take into account the other. Each is apt to go wrong in taking partial views. Knowledge is too often considered the raw material stored away in memory, without being transmuted into the substance of the thinker's thought. Out of this false view of knowledge arises the vicious methods of cramming and mere memorizing. Discipline is sometimes so exalted as to despise the content, and the pupil is kept striking into the air lest he hit something. He is trained through forms and processes of thought for the mere sake of the form and the process. There is discipline which is not discipline and knowledge which is not knowledge. The genuine article in one answers the requirements in the other.

THE SCHOOL ROOM.

WITH THE FIRST GRADE.

They were not "very still." How could they be, when every childish energy was awake and seeking normal expression? One group of children were examining two boxes, in one of which corn was growing, in the other beans. They crowded around, an irregular, busy, *observing* group, with pencil and paper in hand. They were soon sent to seats to write out fully what their eyes had told them, but with well-understood permission to go to the boxes, again, if they "needed to."

It should be said that the corn and beans were in different stages of growth.

The children read what they had written.

"The corn leaf is all rolled up when it comes up first."

"Another one comes out, and the first one unrolls."

"The first thing I saw was a little green point. The beans didn't come up that way."

"The veins in the corn leaf run up and down."

"There's a little drop of water at the very point of every leaf."

(Question by teacher: "Was it there, last night? How has it come?" left for children to answer.)

"The bean split itself open, and then a stem grew out, and two leaves came out. The bean is getting all eat up."

"The corn stays in the ground, and gets eat up there."

"The roots get water and things to eat in the water. That makes the leaves grow."

"They can't get things to eat unless it's in water."

The writing was *without lines*, in a fair, round, upright hand, good use of capitals; spelling of words not criticised, as all words asked for were written on the board by the teacher. In one case, "seed" being on the board, when a child wished the word "need," the teacher sounded it for him, pointing to "seed," and he wrote it correctly.

Nearly every paper was illustrated by a drawing of the leaf or some part of the plant.

The memory gem on the board was the one beginning

"As wonderful things are hidden away
In the heart of a little brown seed,
As ever were found in the fairy net
Of which children sometimes read."

Another group of little ones were looking at branches of different flowering trees. They had branches of box-elder, elm, cottonwood, wild plum, and peach. The names of these were written on the board, and they were to copy them, with a picture of the branch opposite.

"But could these children read?" Yes, else they could not have taken the "step beyond," of writing their own thoughts. They could read well in their readers, and sentences they had never seen before. They consulted a phonic chart of *equivalent sounds*. Thus, a boy who did not know "rain" was referred to the "ā" chart, where side by side, were lists of "ā," "āy," "āi," etc.

You couldn't "hear the clock tick" (which seems to be the highest ambition of some teachers), and there was bustle, energy and activity. I noticed, however, that the low spoken order, "pencils down," was obeyed instantly. and that all movements were free and alert.

The writing of the lower class was very large, on the board and large sheets of *unruled* paper. The movement, whole arm, rapid and free. They seemed too busy and interested to whisper unless they really needed something.

They consulted their readers to find out how to spell words, and translated from print to script very easily.

In a word, these little people seemed at home and happy, growing in the sun of confidence and light of freedom.—*By Mrs. E. F. Tucker in N. W. Journal of Education.*

TRUTHFULNESS BY EXAMPLE.

Act the truth. Do not pretend to know things you do not know. Do not insist upon things about which you are uncertain. Even a child does not expect a teacher to be the embodiment of all wisdom. If she claims it, he knows she is masquerading; if she admits a doubt, he knows she is acting truly; he sees that he and his teacher have some things in common; she has a stronger hold upon him.

A boy handed up his written spelling lesson for correction. The teacher marked a word as incorrect, which he thought was spelled correctly. He gathered up his courage and told her he thought she had made a mistake. She brushed him aside with an indignant remark about doubting her ability to spell. In ten minutes he saw her engaged in profound communion with the dictionary. He gained confidence. She said nothing, but seemed dejected. He put his paper in his pocket and went home, and consulted his dictionary. He had spelled the word correctly. She had lost his good opinion forever. It was a serious loss, but who shall say that she did not pay the proper penalty for her act. She had made a mistake. It was not serious at the outset. It was a comparatively small matter that she had an erroneous impression about the spelling of the word. But persistence after she knew better was acting an untruth. It was utterly inexcusable. It was impolitic too. Suppose she had given him only what was his due and said, "My boy, I was hasty and wrong about that; you were right; I will have to be more careful next time." He would have been exultant, but that would not have humiliated her. She would have gained his respect and his friendship as well.

In another case, a teacher in this city told Mary, a young miss among her pupils, that Martha, her intimate girl friend, was headstrong and flighty and not doing well, and asked her to exert her influence over her and help her reclaim the wayward sister. The teacher told Martha the same things about Mary and exacted her help to recover the other sinner from destruction. Neither of the girls was in danger. The teacher did not think they were. She probably meant well enough. She intended to profit each girl by getting her

interested in helping the other. But she did not think far enough or as truly as she ought. The girls compared notes. They discovered that there was an element of deception about the matter and the result was not particularly helpful to the teacher.

There is a mathematical accuracy about the truth. It always fits together. There is no safe compromise ground. The danger signal is upon the border line. Truth or untruth may be acted as well as spoken. It is not necessary at all times to tell all that is true. But whatever is said and whatever is done in the schools, is to be open and straightforward, wholly within the bounds of truth.—*A. S. Draper.*

EDITORIAL.

NATIONAL Educational Association July 7-10, at Buffalo. Headquarters for Indiana teachers will be "The Gruener Hotel." This is not a large hotel but it is a new one, and is centrally located. It is well recommended by the local committee. Price \$2.00 per day, two in a room. For boarding at lower rates address Albert E. Swift, Buffalo. Teachers should write direct to the proprietor of the hotel to engage rooms. It is to be hoped that Indiana will send a large delegation to the association this year. See the railroad advertisements for information in regard to routes.

CHAS. A. MCMURRY, in the April INDIANA SCHOOL JOURNAL, says the Herbartians "are seeking to enrich the life of children by enriching the course of study, and by finding out and applying natural and rational methods of instruction." Does this imply that educators of this country sought something else until the Herbartians came, and are now seeking something else, unless they are Herbartians?—*R. Heber Holbrook, The Normal Exponent.*

This paragraph gives voice to a spirit that is too prevalent among teachers and is unworthy of us. Why cannot we be hospitable to new suggestions and methods of applying ideas which education has always sought to realize. Do we not know that our course of study needs to be enriched—by which is meant that the children ought to be more enriched by it; and that natural and rational methods of instruction do not prevail as they ought to in our schools? The writer really thought he was doing God's service in both the matter and the method of his teaching a generation ago, and a larger experience and knowledge convinces him that he was not mistaken. But God can be served better now than we served him then, for the conditions have improved, and so has our vision. The Herbartians are of special value to education at this time because they have the ear of the educational public, and are emphasizing reforms that are needed, in a rational way and in a spirit that it would do well for us all who may not be classed with

the Hebartians, to emulate. All earnest educators are seeking for one and the same thing—the better education of the children. The Pauls have planted well in the past. Why shall the Apolloses whose business it is to water sneer at one another because of the fashion of their watering pots. The old pots were good when skillfully used, the new ones have some evident improvements. Let us all accept them in the spirit of hospitality and thankfulness, and attach the improvements to our own vessels and go on with our watering, trusting in God to give the increase.—*The Public School Journal*.

THE POLITICIAN AND THE PUBLIC SCHOOL.

Lewis H. Jones, formerly superintendent of the Indianapolis schools, now superintendent of the Cleveland, O., schools, has an article in the June *Atlantic* on "The Politician and the Public School." While this article is of general interest, it is of special interest to Indiana teachers. The article is a vigorous one, and deals with the greatest enemy the public schools have. The cities of Indianapolis and Cleveland are used as examples, as these are the only two large cities that have been comparatively free from the domination of the politician.

For thirty years, the superintendents of the Indianapolis schools have been comparatively free to select, promote and dismiss teachers on the score of merit—this without law. In Cleveland, this right was secured for the superintendent by law.

A few extracts from Mr. Jones's article will indicate its character:

"The unscrupulous politician is the greatest enemy that we now have to contend with in education. His highest conception of the public school is that its revenues offer him the opportunity of public plunder.
* * * He commits the unpardonable sin when he interferes with the rightful tenure of office of the teacher and seeks to make political reasons more effective than professional competency in securing and retaining teachers' positions.

"All promotions to places of responsibility should be made by the superintendent, alone if in a small city, together with his assistants, if in a city so large as to require assistants.

"There are three important functions in the management of a corps of teachers, in any system of schools: The selection, appointment and assignment of teachers; the promotion of teachers to fill vacancies occurring in the more important positions; the discharge of unworthy, incompetent, or non-progressive teachers."

In speaking of the Indianapolis schools, Mr. Jones has this to say of the different superintendents, without naming them:

"The man first elected to the superintendency, (A. C. Shortridge), and charged with the permanent organization of a city school system, made it clear as a cardinal principle of action that he was to be regarded as an educational expert; and that if his services were

accepted at all, it must be on the ground of his capability to organize and to carry forward the work of the educational side of a public school system.

"His immediate successor (Geo. P. Brown) was a scholarly, thoughtful man, a true teacher of teachers. He developed a taste for philosophic and literary studies among the teachers of the city, that has remained to the present time.

"The *third* superintendent (H. S. Tarbell) brought to the work organizing power of a high order connected with scholarly habits. He modified the course of study, improved the general organization of the schools, preserved and extended the studious habits of teachers and



LEWIS H. JONES.

especially gave tone and efficiency to the work of individual teachers."

The fifth superintendent was Mr. Jones, the writer of the article. He took up the work where Mr. Tarbell left it, carrying it on successfully, until the schools of Indianapolis stand among the first in the country.

Mr. Jones attributes the excellence of the Indianapolis schools, largely to their freedom from political domination—"to the fact that superintendents, supervisors and teachers, have, in their professional capacity, held the respect and confidence of the community to such an extent as to preclude in the public mind any tolerance of non-professional interference in the tenure of office."

VACATION SCHOOLS.

What to do with boys and girls in the crowded tenement districts of our large cities during the long summer vacation is a question that is assuming prominence with educational people. For, to most of these children the street is the only playground and from morning until night they are left largely to their own devices. If there is one boy or girl particularly vicious in the neighborhood, there is little good influence to counteract the bad. The question is not new, but the work for these children has assumed a new phase. Hitherto benevolent people have exerted themselves to get these children in the country for a week or so, chiefly on the score of health. Only a very limited number were thus benefited. The newer movement is to gather these children in schools and give them something to do. Not with their heads but chiefly with their hands. "Open vacation schools" is the new idea and many cities are turning their attention in this direction.

In Boston, in Cincinnati and Chicago on a very small scale, and in New York on quite a large scale these schools have been maintained with a great degree of success. The secret of their success has been the methods employed. All attendance has been voluntary, children from eight to eighteen being admitted. Kindergarten plays have been employed for the youngest children, and manual training including clay-modelling, sloyd, drawing, designing, cooking, sewing and botany for those that are older. Strict school regulations are not required and children are trained while they think they are being amused.

These schools existed at first as benevolent enterprises. Since city civil authorities have recognized their value and school men have discovered that they have a place in the school system, several cities are adding "vacation schools" to their list. In 1895 New York employed eighty-four teachers in these schools. The city furnished the buildings and appliances, the "Association for the Improvement of the Poor" paid the teachers.

This summer Chicago is working in this direction. Steps have been taken looking to the opening of vacation schools under the supervision of the Educational Committee of the Civic Federation. The Board of Education has granted the use of several large buildings for this purpose.

Indianapolis is following in a humble way. The use of one of the school yards has been granted by the Board and a society of young people connected with Plymouth Church will pay a teacher for six weeks to direct the plays and interest the children who gather. The building is located in one of the needy districts of the city. Is not the idea and the work worthy of adoption by many of our larger towns?

TOWNSHIP INSTITUTE WORK.

The following is a synopsis of the Township Institute work for 1896-7:

Seven lessons in "Guizot's History of Civilization."

Seven " " "Method in Reading" (Tompkins).

Four " " Grammar.

Three " " Composition.

One outline on Young People's Reading Circle.

One lesson in General Method.

" " " Method applied in Arithmetic, 1, 2 and 3 years.

" " " " " Geography, 1, 2 and 3 years.

" " " " " History, 1, 2 and 3 years.

" " " " " Spelling and Writing.

" " " Arbor Day exercises, second institute.

Supplementary program on "Patriotic Day."

It is the thought of the committee to continue the Method in Arithmetic, Geography and History for two or three years, carrying the work through all eight years in the Course of Study.

Respectfully submitted,

SUPT. E. L. HENDRICKS,	} Committee.
" F. E. COOPER,	
" C. H. WEST,	
" J. H. REDDICK,	
" F. A. COTTON,	

TEACHERS' READING CIRCLE BOOKS.

The following has been sent to each county superintendent: The course of reading for 1896-7 will consist of

"Guizot's History of Civilization," price \$1.00.

"Literary Interpretations," " .50.

The merits of "Guizot" are well known to all the writers and students of history. The book has been carefully revised and edited by Dr. Geo. W. Knight, of the Ohio State University, for the special use of the Indiana teachers.

"Literary Interpretations," by Arnold Tompkins, is a concrete application of the principles of psychology as presented in the pedagogical studies of the past three years of the course. In short, it is method in reading, in which Hawthorne's Great Stone Face, Emerson's Self-Reliance, Tennyson's Holy Grail, and Lowell's Vision of Sir Launfal are used as a basis.

Copies of these books will be sent you within the next few weeks.

The annual examination for Reading Circle diplomas will be held July 18. Teachers passing satisfactory examinations in General Method and Henry VIII and The Tempest will be exempt from examination on Science of Education and on Literature for county license. Questions for this examination will be sent you within a few days.

EMMA MONT MCRAR, President.

F. A. COTTON, Secretary.

HORACE MANN.

This year is the centennial of the birth of Horace Mann, and it is gratifying to note that the event is being so generally celebrated. In Michigan, the state superintendent took the matter in hand and urged that every school in the state celebrate May 4, the anniversary day. The Iowa state superintendent did the same thing and the celebration was general. Col. Parker of the Cooke county normal school had his school spend the day in appropriate exercises. Antioch College, at Yellow Springs, O., Mr. Mann's old college, spent May 4 in celebrating the event and at the commencement season, one entire day was devoted to appropriate exercises and the entire commencement week was interspersed with reminiscences of the old time (1853-59) when Mr. Mann was president of the college. A great many of the students under Mr. Mann were present and the occasion was one of much interest.

The National Association has set apart one session to be devoted to the memory of Horace Mann, the main feature of which will be an address by Wm. T. Harris, U. S. commissioner of education.

Many other schools in many places have joined in doing honor to the memory of America's greatest educator.

HERBART SOCIETY.

The Second Year Book of the National Herbart Society will be sent out in a few days. Members of the society are urged to send their fee at once to Dr. Charles A. McMurry, secretary, Normal, Illinois. The fee for single membership is one dollar; seventy-five cents for each person in clubs of four or more. Those who intend to go to the Buffalo meeting of the N. E. A. and want to attend the meetings of the Herbart Society should read the Year-Book carefully to come prepared for the discussions.

QUESTIONS AND ANSWERS.

STATE BOARD QUESTIONS USED IN MAY.

SPECIAL NOTICE.—For the six months beginning with the May examination, the questions in the Science of Education and Literature will be based on McMurry's General Method and The Tempest, respectively. The books will not be subdivided as during the last six months.

In answering the questions on The Tempest the teacher will be allowed to use the book.

SCIENCE OF EDUCATION.—1. Explain the meaning of concentration as an educational conception.

2. In teaching U. S. History, for example, what would the principle of concentration require?

3. In teaching all the common school branches throughout the eight grades, what would the principle of concentration require?

4. May the principle of concentration be extended to include the home life and other experiences of the pupil outside the school?

If you answer affirmatively, show what you mean.

5. What is meant by organizing one's knowledge of a subject—having an *organic* knowledge of Arithmetic, for example?

6. When we speak of the *organizing principle* of a subject, what is meant?

7. How is the principle of organization or concentration violated frequently in Geography work, for example?

8. Describe the Herbartian theory of culture epochs. (*Any five*).

PHYSIOLOGY.—1. What is a system?

2. Explain the wearing away of the epidermis and the compensation of the loss by growth.

3. What is the special function of the kidneys?

4. What is the function of the eustachian tube?

5. How does the eye accommodate itself to vision at different distances?

6. What is the function of nerve fibers?

7. What is the difference in structure and function between white and gray nervous matter?

8. What causes excessive drinking of alcoholics or the desire for it? (*Any five*).

ALCOHOL AND NARCOTICS.—1. To what extent does the presence of lupulin in pure beer tend to increase stupefaction in those who use it largely?

2. How does the use of alcoholic drinks produce the terrible headaches after drunkenness? To what does this point?

3. What did the experiments of Dr. Beaumont in the case of Alexis St. Martin teach as to the evil effects of alcohol on the human system?

4. Which is the more injurious to the system generally, smoking or chewing tobacco? Why?

5. What does the life of De Quincy or of Coleridge show as to the effects of opium upon the will power? (*Any four*.)

GEOGRAPHY.—1. What is geography?

2. Why should the teacher make a special preparation of every lesson in geography? How should the social conditions of the pupils influence the character of that preparation?

3. What relation do the manufacturing interests of such States as New York and Pennsylvania bear to the foreign commerce of the country?

4. To what extent is the rapid growth and prosperity of California due to its system of navigation?

5. Why is Alaska so valuable to the United States? What is its form of government?

6. Geographically speaking, why should Great Britain be so anxious to extend the western boundary of British Guiana as to include the mouth of the Orinoco?

7. Discuss the geography work as outlined in the State Course of Study. *(Select No. 7 and any other five.)*

GRAMMAR.—“All stood amazed until an old woman tottering out from among the crowd, put her hand to her brow, and, peering under it in his face for a moment, exclaimed, sure enough! it is Rip Van Winkle.”

1. Point out the three essential elements of the above sentence. Define the essential elements of a sentence. 10%

2. What is the first subordinate clause? Name the three elements. 10%

3. Explain the use of “amazed,” of “peering.” 10%

4. State the relation of each noun in the sentence. 10%

5. Distinguish between a simple and a compound sentence. 10%

6. Write a composition of 200 words on “The teaching of grammar.” 50%

HISTORY.—1. “History is the life development of a people.” Discuss this definition of history.

2. Should history “be viewed as something wholly past and completed,” or “as a process now going on in every community, every nation, and in the race as a whole?” Explain fully.

3. Give three reasons why we should study biography in primary history.

4. Write the history of slavery, as it existed in the United States, using not more than 200 words.

5. Describe the manner of electing a president of the United States. How old must a man be to be eligible to the presidency?

6. Give a brief summary of the history of this country from Washington to Buchanan.

7. Discuss the fourth year history work in the State Course of Study. *(Select No. 7 and any other four.)*

ARITHMETIC.—1. What is meant by a *principle* in arithmetic? Give one and illustrate your definition through it.

2. Show, as to a class, how units of the same kind only can be added.

3. (a) Multiply 327 by 34, giving such an explanation of the process as you think necessary to a pupil beginning that subject.

(b) What tests would you apply to a pupil to satisfy you he was ready for the above work?

4. Give full explanation of the process of factoring to find the G. C. D.

5. Bill. Evansville, Ind., Jan. 9, 1896.

F. J. Scholz & Co.,

Bought of Willard Carpenter & Co.

15 pairs boys' thick boots at . \$1 25

7 pairs boys' calf boots at . . 3 20

8 cases men's calf boots at . . 35 75

40 gross silk buttons at . . . 37½

Settled by note.

Complete the above transaction, making out the bill in proper form, writing note, receipting bill, etc.

6. At 35 cents a roll, what will be the cost of papering the walls and ceiling of a room 18 feet long, 14 feet wide and 12 feet high, making no allowance for openings, the baseboard being nine inches high?

7. A man, by selling a lot of goods for \$438, loses 10%. How much should they have been sold for to gain $12\frac{1}{2}\%$ of the \$438?

8. Five men can do a piece of work in 9 days. How soon after beginning must they be joined by two more so as to complete the work in 8 days? Give careful solution and verify result.

9. I sold one-half of a lot of lumber for what five-eighths of it cost. What per cent. did I gain on the part sold? Make a concrete problem based upon that proposition, and verify to show that your work is correct.

10. What sum must be invested in stocks bearing $6\frac{1}{2}\%$ at 105 to produce an income of \$1,000?

THE TEMPEST.—With the book open before you, organize the *principal events* of The Tempest in the order in which they are related in the drama itself.

READING.—“There are many good things from which I might have derived good, by which I have not profited, I dare say, Christmas among the rest. But I am sure I have always thought of Christmas time, when it has come round—apart from the veneration due to its sacred origin, if anything belonging to it can be apart from that—as a good time; a kind, forgiving, charitable, pleasant time; the only time I know of, in the long calendar of the year, when men and women seem by one consent to open their shut hearts freely, and to think of people below them as if they really were fellow-travelers to the grave, and not another race of creatures bound on other journeys.—*Charles Dickens*.

1. From which one of Dickens's writings is the above taken? How does it compare in point of literary merit with his other productions?

2. State what you believe to have been his purpose in its writing.

3. The delineation of which of its characters leaves the deepest impression on the youthful reader?

4. Do you believe it to be well to have pupils read the story entire? Why?

5. What others of Dickens's works would you recommend as suitable for young people's reading courses?

ANSWERS TO PRECEDING QUESTIONS.

SCIENCE OF EDUCATION.—1. Concentration is the unifying into a practical working power of all the ideas and experiences that find entrance into a particular mind.

2. It would require the weaving together the ideas pertaining to the growth and progress of literature, of science, and of mathematics; and with those ideas and experiences regarding the effect of climate, mountains, products, upon the life of the people in different sections of the country.

3. It would require the unifying of the related ideas of the branches into one or more forceful powers of practical utility. Unrelated facts would be left by the wayside.

4. It can. The chief purpose of the school is the development of character. The home life of the pupil, its experiences and influences may be caused to contribute much material for our spiritual superstructure. Let this material and that evolved from school life, and, indeed, that furnished by the church and society—let it all be concentrated into a unit of forceful power that will achieve a character, beautiful in its design and noble in its attributes.

5. By organizing one's knowledge is meant the classification of its materials according to some basal principle or principles, and the arranging of the ideas in logical dependence and inter-dependence.

When one has an organic knowledge of arithmetic, his mind has the whole science in its field of vision, and can readily locate and seize upon any principle that is needed in practical life, because its subject matter is properly classified and arranged.

6. By the organizing principle of a subject is meant the purpose, or the central line of thought, to which all else is tributary; and matter that does not relate or bear upon the elucidation or the establishment of this principle is irrelevant and should not be given any attention.

7. By not fixing the relations—by simply looking upon the ideas as isolated facts—by not studying the subject with the idea of its purpose in view.

8. The problem of the culture epochs is to discover "what relation the leading epochs of progress in the race bear to the steps of change and growth in children."

PHYSIOLOGY.—1. A system is a group of organs which are more or less united for a common purpose.

2. (See page 195.)

3. (See page 203.) The chief function of the liver is to excrete nitrogenous waste products.

4. The eustachian tube allows air from the throat to enter the tympanum, and serves to keep equal the pressure on each side of the drum membrane. It also serves as an exit for abnormal fluid matter.

5. For near objects the "fibers of the ciliary muscle contract, thereby lessening the tension on the capsule of the lens. The elasticity of the lens causes its front surface thus released to spring out in a more convex outline." (See pages 267, 268.) For distant objects the fibres of the ciliary lessen their degree of contraction to accord with the distance.

6. The sensory fibers convey their received impressions to the nerve centers or ganglia; the motor fibers convey the reflex action of the nerve centers to the different organs.

7. The gray matter is cellular and originates nerve-force; the white matter is fibrous and conducts impressions or nerve-force.

8. The idea that by so doing, a depressed mind may be cheered or enlivened, or a wearied body stimulated or vivified. The idea is a fatal illusion.

SCIENTIFIC TEMPERANCE.—1. Lupulin is a colorless, volatile, liquid alkaloid contained in hops, and is bitter to the taste. Scientific authority asserts that part of the stupefaction experienced by the beer drinker is due to this principle.

2. The indigestion that results, the congestion of the blood-vessels in the brain, and the tax upon the energies of the whole system, produce the headaches.

3. Dr. Beaumont saw that the lining of the stomach became unusually morbid and inflamed, and in a short time covered with ulcerous patches, soon after the patient began to use alcoholic stimulants.

4. This has not been definitely determined. Some authorities state that *chewing* is the more harmful; the reason given is that the poisonous principle by this mode of use is more quickly distributed through the system by the agency of the mucous membrane of the mouth.

5. That it soon destroys it. The case of Coleridge was pitiable. In the quantity of this terrible drug which he daily used, he left even De Quincey far behind. Selfish indulgence, aimless indolence, habitual untruth were some of the results besides the loss of will power.

HISTORY.—1. The life development of a people is illustrated and manifested by the institutions which they create and sustain; and the story of the creating and sustaining of these institutions is *history*.

2. It is a "process now going on in every community in every nation and in the race as a whole," for the life development of the people and the creating and sustaining of their institutions are now going on, and will go on as long as the race exists.

3. Such material is easily made interesting to children; is rich in matter suitable for the moulding of character; and forms the only true basis for future work, for the pupils learn of the achievements of men who have been foremost in promoting the progress of civilization, institutional life, and the rights of man.

4. Slavery was introduced into this country by the Dutch and soon spread to all the colonies, but climate, in time, limited it to the southern portion. The slaves being human, our Constitution was compelled to recognize them both in and between the lines. The system controlled the admission of states in the preservation or the balance of power in the Senate, and through its mad struggle to extend its territory a limitation was set. Then came a period of quiet, but of preparation, and anti-slavery societies, lecturers, petitions, and publications at last kindled anew the southerner and his northern sympathizer, and destruction of property, martyrdom, and bitter enmity followed. Freedom insisted on preserving the boundary line, and slavery waged a war of conquest for more territory over which it might spread, and later on, effected legislation that nullified the old limitation. This raised a war of words which in a few years became a war of swords. Our disunited country did not become one until it had been baptized in fraternal blood, and victory seemed uncertain until emancipation was proclaimed. From that moment the bondman knew that freedom had come.

5. See the Constitution.

6. The Federals were in control until 1801, when Jefferson was elected. A division in the sympathies of our people for France and for England caused much trouble in commercial and maritime affairs, and at last war came. We were victors, the Federal party passed away, and the era of good feeling followed. Outside the slavery question (see answer to 4) there were the issues—the U. S. Bank, internal improvements at government expense, and the tariff question. The bank was killed, the internal improvement idea prospered and then faded out only to be revived again stronger than ever, and the tariff question has lived with varying changes through it all. In 1824, there was a re-organization of parties and in 1828, the present democratic party began its real life. The whigs organized in 1834 and lasted till 1852, and two years afterward the present republican party began.

GEOGRAPHY.—1. Geography is the science that describes the surface of the earth, with its various peoples, animals and natural products.

2. For the same reason that he should make a special preparation of every lesson in every branch—that he may be able properly to test the pupil's knowledge of the lesson; that he may be able to enlist and sustain the pupil's interest, by searching questions and fruitful suggestions; that he may be able to bring about the purpose of the lesson, by keeping the central idea in view throughout the recitation.

3. The manufacturing interests of such states as New York and Pennsylvania would be endangered by foreign importations; hence, we find such states favoring a protective tariff. Should the manufacturing interests thrive the foreign commerce of these states would decrease. Should the manufacturing interests wane the foreign commerce would increase.

4. We suppose "navigation" here is a misprint for *irrigation*: for *irrigation* is causing in some parts of California phenomenal growth of all the valuable fruits and cereals of both the temperate and tropical zones. Millions of dollars have been invested in irrigation in the southern part and every year hundreds of acres of the desert lands are re-claimed and transformed into the most valuable and fertile gardens of the world.

5. For its furs from the fur-seal, sea-otter, beaver, fox, marten, etc.; its fisheries of salmon, cod, herring, etc.; and its forests. The mines are yet in a state of development.

Alaska is called a *district*. The government consists of a governor, a district judge, a clerk of the court (who is also secretary and treasurer of Alaska), and a U. S. district attorney; a collector of customs, and several deputies; U. S. commissioners at Ft. Wrangell, Sitka, Tunenau, and Unalashka; and a marshall and several deputies. It has no delegate in Congress and no local legislature.

6. So as to control the navigation of this great river, which would be of incalculable advantage in the future, in regard to both commerce and war.

7. See State Course of Study.

GRAMMAR.—1. The essential elements of a sentence are the parts necessary to its structure. Some authors state that there are *two*, the *subject* and the *predicate*; (others claim one more, the *copula*). In the sentence given, "All" is the subject, and "stood amazed" the simple predicate. (By some, "stood" is called the copula.) For other definitions see grammars.

2. The first subordinate clause is, "until an old woman,..... put her hand to her brow;" the subject is "woman;" the predicate is "put;" [the *copula* is incorporated in *put*, (was putting)].

3. "Amazed is a past participle, used as a predicate adjective; "peering" is a present active participle modifying *she* understood; (the preserving of the true thought of the sentence in time relation demands the supplying of *until she* before "peering.")

4. "All" is nominative; "woman" is nominative; "hand" is object of "put," "crowd," "brow," "face," "moment" are prepositional objects; "Rip Van Winkle" is a predicate nominative.

5. A simple sentence is a single proposition or clause—it has but one subject and one predicate. A compound sentence has two or more propositions or clauses joined co-ordinately.

READING.—1. The selection is from Dickens's "Christmas Carol." This story is certainly not inferior, in point of literary merit, to any thing else that he ever wrote.

2. The purpose is to teach the duty and nobleness of giving, in the proper meaning of the term. Logically subordinate, and yet co-ordinate in importance in this story, is taught the fitness of giving during Christmas times.

3. The character of "Tiny Tim."

4. The pupil should read the entire story. Its plot does not admit of selections, except here and there a choice paragraph teaching a lesson of its own, and containing no incidents germane to the story.

5 Little Dorrit, Child's History of England, Nicholas Nickleby, and Old Curiosity Shop.

ARITHMETIC.—1. A principle in arithmetic is a fundamental truth upon which certain processes depend; as, "Only numbers of the same denomination can be added." In adding 4 bu, 3 pk., and 7 qts., all must be reduced to the same denomination, if we wish the result in one denomination; also, in adding $\frac{3}{4}$, $\frac{2}{3}$, and $\frac{1}{6}$, we must reduce all to twelfths.

2 See answer to 1. Four apples and seven marbles cannot be represented by a single term. Use these objects, or others, and ask appropriate questions—Will the result be 11 apples or 11 marbles? etc.

3. Explain it by using 30 and 4 for the multipliers. (See Arithmetics.)

4. (See arithmetics.)

5. The result is \$342.15. The other work is given in full in the arithmetics.

6 We will suppose the paper 18 in. wide, and 8 yds. to the roll. roll, then, covers 36 sq. ft. $(18 \times 14) \div 36 = 7$, number of rolls for

ceiling. $[(18 + 18 + 14 + 14) \times 11\frac{1}{4}] + 36 = 20$, number of rolls for the walls; 27 rolls @ 35 cts. = \$9.45.

7. If 90% = \$438, 100% = \$486 $\frac{2}{3}$; 12 $\frac{1}{2}$ % of \$438 = \$54 $\frac{3}{4}$; \$486 $\frac{2}{3}$ + \$54 $\frac{3}{4}$ = \$541 $\frac{5}{8}$.

8. There are 45 days work in the job; 5 men working 8 days would do 40 days work, leaving 5 days work to be done by the two men. They would do that much in 2 $\frac{1}{2}$ days; hence they should be called in at noon of the sixth day.

Proof:—5 men in 8 days do 40 days' work.

2 " " 2 $\frac{1}{2}$ " " 5 " "

45 days' work for one man, or 9 days' work for 5 men.

9. $\frac{4}{5}$ = cost price; $\frac{5}{4}$ = selling price; gain = $\frac{1}{4}$ on what cost $\frac{4}{5}$, or $\frac{1}{4}$, or 25%.

I sold $\frac{1}{2}$ my lumber for \$1500, which was what $\frac{5}{8}$ of it cost; what did I gain?

If $\frac{5}{8}$ cost \$1500, $\frac{1}{8}$ cost \$1200, a gain of \$300 on \$1200 = 25%.

Proof:—25% of \$1200 = \$300; \$1200 + \$300 = \$1500.

10. 6 $\frac{1}{2}$ % = \$1000; 100% = \$15384.61 (Stock). If each dollar is worth \$1.05, \$15384.61 is worth 15384.61 times \$1.05, or \$16153.84.

THE TEMPEST.—Any one wishing the story of *The Tempest* can get it by sending a 2c. stamp to Prof. Jonathan Rigdon, Danville, Ind. Prof. Rigdon has written the story for "Good Books."

FOOD FOR THOUGHT.

[Send all communications to W. F. L. Sanders, Connersville, Ind. They should be received by July 18. Be prompt. Write only on one side of your paper.]

SOLUTIONS RECEIVED.

PROBLEM 130. A man bought a certain number of bonds of the 3 per cents. at 84, and the same number of 3 $\frac{1}{2}$ per cents. at 91; his income from both investments together was \$260; how much money did he invest?

SOLUTION.—One 3 per cent. bond yields \$3 income, and one 3 $\frac{1}{2}$ per cent. bond yields \$3 $\frac{1}{2}$ income; together, \$6.50; \$260 income is 40 times \$6.50; hence, he bought 40 bonds of the 3 per cents. and 40 bonds of the 3 $\frac{1}{2}$ per cents. 40 bonds at 84 cost \$3360; and 40 bonds at 91 cost \$3640; \$3360 + 3640 = \$7000.

[BY WALTER N. VANSOVOC, Crawfordsville, Ind.]

PROBLEM 131. I look at my watch between 4 and 5; on looking again between 7 and 8 the hands have exactly changed places; at what time did I first look at my watch?

SOLUTION.—The first time he looked the minute hand was between 7 and 8.

Let $(35 + y)$ min. past 4 = time at first looking.

and $(20 + x)$ min. past 7 = time at second looking.

In the interval, the minute hand traveled—

$25 - y + 120 + 20 + x = 165 - y - x$; and the hour hand traveled $15 - x + y$.

Hence $165 - y + x = 12 (15 - x + y)$;

from which we get $x = y + 1\frac{1}{2}$.

At 7 o'clock the minute hand must yet travel $21\frac{1}{2} + y$, and the hour hand must travel y .

Hence $21\frac{1}{2} + y = 12y$

$y = 1\frac{1}{2}$

$35 + y = 36\frac{1}{2}$, the number of minutes past 4, when he first looked. [BY ALTON BLUNK, Crown Center, Ind.]

PROBLEM 132. A man sells an article at 4% profit; if he had bought it at 4% less and sold it for 20 cents more, he would have gained 10%; what was the cost price?

SOLUTION.—

Let 100% = the real cost;

then, 104% = the real selling price.

$100\% - 4\% = 96\%$ = supposed cost.

10% of 96% = 9.6% = supposed gain.

$96\% + 9.6\% = 105.6\%$ = supposed selling price.

But $104\% + 20 \text{ cents}$ = supposed selling price.

Therefore $105.6\% = 104\% + 20 \text{ cts.}$

or $1.6\% = 20 \text{ cts.}$, from which we get

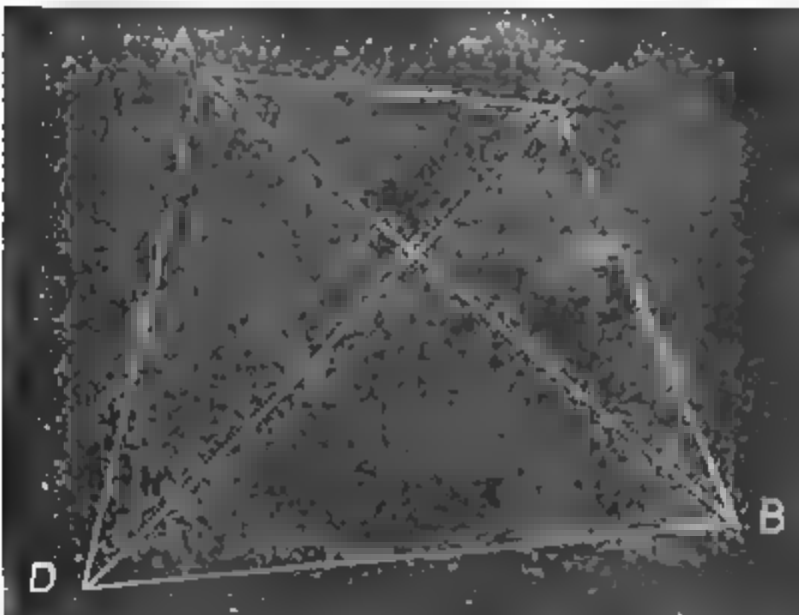
$100\% = \$12.50$, the cost price.

[J. A. NEWLIN, Plainfield, Ind.]

PROBLEM 133 A cone of loaf sugar is 1 meter high, and the diameter of its base 40 centimeters. How far from the base must the cone be cut by a plane parallel to the base, in order that the two parts may be equal in volume?

SOLUTION.—As volumes are to each other as the cubes of their like dimensions, we have—

$2:1::(100)^3:(x)^3$; from which $x = 79.36+$, the altitude of the cone above the section. $100 - 79.36+ = 20.63+$, the height of the section above the base. [OTTO CLAYTON, Fowler, Ind.]



PROBLEM 121. What is the area of a field, whose sides in successive order are 16, 20, 30 and 24 rods, and whose diagonals are equal?

SOLUTION.—Let x = the diagonal. $AC = 16$; $CB = 20$; $BD = 30$; and $DA = 24$. Then by the rule for finding the area of a triangle we have—

$$\text{area } ACB = \sqrt{\left[\frac{36+x}{2}\right] \left[\frac{36-x}{2}\right] \left[\frac{x+4}{2}\right] \left[\frac{x-4}{2}\right]} \dots\dots (1)$$

$$\text{area } ADB = \sqrt{\left[\frac{54+x}{2}\right] \left[\frac{54-x}{2}\right] \left[\frac{x+6}{2}\right] \left[\frac{x-6}{2}\right]} \dots\dots (2)$$

$$\text{area } BCD = \sqrt{\left[\frac{50+x}{2}\right] \left[\frac{50-x}{2}\right] \left[\frac{x+10}{2}\right] \left[\frac{x-10}{2}\right]} \dots\dots (3)$$

$$\text{area } ACD = \sqrt{\left[\frac{40+x}{2}\right] \left[\frac{40-x}{2}\right] \left[\frac{x+8}{2}\right] \left[\frac{x-8}{2}\right]} \dots\dots (4)$$

Now, area $ACB + \text{area } ADB = \text{area } BCD + \text{area } ACD$; and placing the sum of expressions (1) and (2) equal to the sum of expressions (3) and (4), and simplifying, we get

$$x^4 - 1066x^2 = -103,328, \text{ from which}$$

$x = 30.954+$; the diagonal. Using this value, we

$$\begin{array}{l} \text{find area } ACB = 141.04506 \\ \text{" area } ADB = 335.91681 \end{array} \left. \vphantom{\begin{array}{l} \text{find area } ACB = 141.04506 \\ \text{" area } ADB = 335.91681 \end{array}} \right\} \text{together} = 476.96187$$

$$\begin{array}{l} \text{and area } BCD = 287.57014 \\ \text{" area } ACD = 189.39173 \end{array} \left. \vphantom{\begin{array}{l} \text{and area } BCD = 287.57014 \\ \text{" area } ACD = 189.39173 \end{array}} \right\} \text{together} = 476.96187$$

$$476.96187 = 2.98+ \text{ acres, the area.}$$

[BY JOHN MORROW, Charleston, Ind.]

CREDITS.—130, Mattie M. Bever, Jennie Ochiltree, Clara Jewell, Boyd Wilson, W. K. Stoops, Madge K. Jewiss, Maggie Walsh, Vincent Barker, Emma E. Jordan, Minnie Dillon, Pearl Thomas, Maud Stoops, Mary L. Greer, Emma McGlinchey, W. E. Sparks, E. L. Jordan, Pearl Sanders, Lizzie Connell, Carrie Shy, Ida Bottles, Fannie Johnson, Ella Crago, Leota Strong, W. E. Jeffrey, D. A. Jeffrey, Iva Brown, Flora Broaddus, Sue Procter, Lizzie Friedgen, Clara Sanders, Anna Jewiss—all Connersville, Ind.; David Barrow, Unionville, Ind.; Walter N. Vanscoyoc, Crawfordsville; Everett Beadles, Velpen.....133, J. Stommel, Hanover Center.....131, 133, Otto Clayton, Fowler.....130, 131, 132, 133, J. A. Newlin, Plainfield; Alton Blunk, Crown Center.

QUERIES AND ANSWERS.

QUERY 42. M gave N a note for \$1200 for 5 yrs. at 8% from date. The interest was not payable annually, and was understood to be due only at the maturity of the note. Upon the note the following payments were accepted:—At the end of 2 years, \$500; at the end of 3 years, \$300; and at the end of 4 years, \$200. What was due at maturity?

[J. S. AXTELL, Ph. D., Portland.]

SOLUTION.—

$$\text{Amount of } \$1200 \text{ for 5 yrs. at } 8\% = \$1690.$$

$$\text{" " } \$500 \text{ " 3 " " } 8\% = \$620.$$

$$\text{" " } \$300 \text{ " 2 " " } 8\% = \$348.$$

$$\text{" " } \$200 \text{ " 1 " " } 8\% = \$216.$$

Adding the last three amounts and subtracting the sum from the first amount, we have \$496, the sum due at maturity.

QUERY 43. Has a county superintendent the right (legally) to keep manuscripts (not graded) from the March examination until May?

This cannot be answered (legally) as there is no statute bearing upon the issue. It is the urgent duty of an officer to be on time in his service of the people, and, morally, an applicant has a right to an answer before the time for the next examination.

Question 6 in Science of Education in June JOURNAL reads—"Does the principle of concentration extend to the relations existing among the different subjects in the course?"

It is answered as though the proposer meant in the course that would be typical, or properly arranged. We believe that such was the intent, and according to this interpretation the answer is certainly correct.

However, A. D. of Hagerstown, Ind., believes that the proposer meant in the course as it is *now* arranged. We agree with Mr. D. and with McMurry that the course as *now* arranged does not follow the principle of concentration to any great extent. McMurry states that concentration is at present generally ignored.

Mr. D. also states that according to the Indiana Complete Grammar, a sentence having a clause for its subject is not a complex sentence, because it has no dependent clause; but in the grammar at the bottom of page 123 and the top of page 124, it will be seen that a clause subject is called a dependent clause in the sentence, "Whether it will rain is uncertain." Nearly all authors call such a sentence a complex sentence.

This contributor also states that it would be just for the county superintendent to accept as correct the answers given in the books we are compelled to use. Here, again, we agree with the gentlemen, and it is likely that most of the county superintendents do accept such answers as correct. Any answer in accord with any of the adopted books should be marked correct by the county superintendent.

As to whom or what we should regard as authority in grammar, etc., we suggest that no one author should be so considered. Most county superintendents in their grading are very liberal in this matter, and count as correct the answer of any reputable author.

We have received a just criticism from two different persons to the solution of Problem 129, by D. H. Loomis. In completing the square, Mr. Loomis has not brought about a perfect square in the left hand member. If Mr. Loomis will do so, we would be pleased to have him make the correction and send in a correct solution.

PROBLEMS.

134. A merchant had a number of eggs and when he counted them by twos there was one left; counting by threes there were two left; counting by fours there were three left; counting by fives there were

four left; counting in this way to 14 he had 13 eggs left. How many eggs did he have? [THOMAS JONES, Sulphur Springs, Ind.]

135. \$7,800 of 5 per cent. stock is sold at 104, and the proceeds invested in railway shares paying 6 per cent.; what is the price of the latter if the income derived is increased by \$26?

136. Two clocks strike 9 together on Monday morning; on Tuesday morning, one is 8 min. to 11 when the other strikes 11; how much must the first be moved up so that they may both strike 9 together in the evening?

137. Show that the square inscribed in a semicircle is to the square inscribed in a quadrant of the same circle $:: 8 : 5$.

138. Given $\begin{cases} x^4 - y^4 = 1280 \\ x^3y + xy^3 = 480 \end{cases}$ to determine the values of x and y , by quadratics.

MISCELLANY.

GREENFIELD has a new high school building, one of the best in the state.

CHICAGO graduated from its high schools this year about one thousand students.

ARNOLD TOMPKINS made the annual address at the Michigan State Normal school, of which R. G. Boone is principal.

FORT WAYNE has returned to the practice of hiring a superintendent of music and has employed for the coming year Prof. Miles.

NOTICE.—A set of the INDIANA SCHOOL JOURNAL from 1872 to 1894 inclusive, (nine volumes bound) all in good condition can be purchased of P. H. Kirsch, Hammond. Ind.

SCHOOL OF PEDAGOGY, Buffalo, N. Y. Frank M. McMurry, Ph. D., dean of the faculty. Special attention is called to the summer term which begins at the close of the N. E. A.

THE Board of Trade, the Commercial Club and the Board of Education of Minneapolis have each issued a cordial invitation to the N. E. A. to hold its 1897 meeting in that city.

THE State Normal at its last commencement graduated a class of ninety-four. The class address was made by Dr. J. P. D. John, who took for his subject "The Worth of Man."

DELPHI graduated from its high school at its last commencement, seventeen, the largest class in its history. The schools closed in good shape and Superintendent Almond is happy.

EDUCATIONAL FOUNDATIONS prints the Indiana State Board questions and answers. The answers in the June issue are taken bodily from the INDIANA SCHOOL JOURNAL, and no credit is given.

ROSE POLYTECHNIC INSTITUTE this year graduated its largest class—twenty-seven in number. This school, located at Terre Haute is conceded to be one of the best of its class in the country.

"THE Graduate Courses" for 1896-97, giving the courses offered by 23 of the leading colleges and universities in this country, will be issued from the press of Messrs. Leach, Shewell and Sanborn, Boston, June 8.

ANY person desiring to take in Chautauqua with the N. E. A. can find excellent accommodations by addressing Mrs. J. Lee Ferguson, Bryant Cottage, Chautauqua. Mrs. Ferguson is an Indiana woman, and will treat Indiana teachers kindly.

THE State Board of Education at its May meeting adopted the following list of books for use in the schools of the state for the next five years: Montgomery's revised histories, Ginn & Co; Indiana revised physiologies, American Book Co.; and the Hyde language books, published by D. C. Heath & Co.

THE latest issue of the *Penman's Art Journal* of New York contains a biographical sketch of W. S. Hiser, teacher of penmanship in the Richmond public schools together with a splendid half-tone portrait. The notice is one that is very complimentary to both Mr. Hiser and the Richmond schools.

COVINGTON high school has just closed a very successful year. There were eight graduates at this, the sixteenth annual commencement. The high school course has been extended to four years and the number of teachers increased. The State Board of Education has just added this to the list of commissioned high schools.

MADISON.—The high school annual, "The Apothegm," does great credit to the board of editors who prepared it, and also does credit to the school it represents. It comprises about 100 pages, is printed on fine heavy paper in the best of style. It is not gaudy but in excellent taste, and the matter it contains is of special interest.

THE Kokomo public schools made their first annual art exhibit in that city commencing June 1. Over 3000 square feet of wall space were covered with drawings from the different grades. Prof. H. H. Greeson, teacher of drawing, directed and placed the pictures. The skill in placing as well as the display itself reflected great credit on Mr. Greeson.

DECATUR—This, undoubtedly, has been one of the most prosperous years in the history of the schools of Decatur. Great praise and commendation is due Supt. A. D. Moffett and his able corps of teachers, for their most efficient work. A close observation of our city schools during the past year convinces us that the most modern and progressive methods are being employed.—*Democratic Press*.

PURDUE UNIVERSITY is taking a stand in favor of a high grade of work rather than large numbers. It has a new scheme by which it proposes to establish, in the larger places, mechanics' institutes, which are intended to do for mechanics what the farmer institutes are doing for the farmers. This will open a great field for usefulness. See Purdue's advertisement on another page. For particulars address the president—James H. Smart, LaFayette.

DE PAUW UNIVERSITY—We have received the year book of DePauw University for the year 1895-96. We are pleased to notice in the statistics of enrollment that during this year there has been an increase in the attendance of students. It has 9 buildings, campuses amounting to over 100 acres, and an annual income of over \$38,000.00. Best of all, it is entirely free from debt. This is certainly a much better showing than some of the reports of former years would indicate.

COLUMBIAN AWARDS —The Richmond schools have received a bronze medal from the committee on awards at the world's fair for excellence of the Richmond exhibit in all branches and especially in advanced drawing ... A diploma and medal were given to the Indianapolis Free Kindergartens for their excellence as a training school, and especially for work in color and drawing ... The Indianapolis high school received a bronze medal for excellence in scientific laboratory work.

PORTLAND—The "*Cactus*" is the name of the annual by the Portland high school. It contains more than 100 pages beautifully printed on superfine paper and tastefully bound in cloth. It contains a picture of the high school building and also pictures of superintendent and the high school faculty, and of all the classes. We have seen nothing approaching the "*Cactus*", outside a few of the larger cities. It certainly has many good *points*. C. L. Hottel is superintendent and I. E. Neff is principal.

HARTFORD CITY—Superintendent F. M. Beard has submitted the following report to the school board. The total enrollment of pupils for the year just closed is 1421, being 84 greater than last year. The average number belonging was 1096, or 44 greater than last year. The average daily attendance was 994, or 47 in excess of that of last year. The per cent. of attendance computed on the basis of the number belonging has been 90.79, being .59 per cent. better than last year. Thus you will observe that in point of attendance, we have made a better record all around than was made last year.

THE Anderson *Herald* issued May 24 gave nearly five columns of its space to a symposium on the question, "Shall Supervisors of Instruction be Employed in the Graded Schools?" Those contributing were Arnold Tompkins, Dr. J. M. Rice, T. J. Fitzgibbon, A. H. Douglass, W. A. Hester, W. R. Snyder, J. F. Knight, Justin N. Study, W. R. J. Stratford, W. H. Wiley, David K. Goss. The expression was unanimous in favor of such supervision. Theory, reason, common sense and experience confirm the wisdom of the conclusion reached. This is one of the live educational questions of the day, and the whole tendency is toward exclusive professional supervision.

LAPORTE COUNTY held its commencement exercises for the common schools in La Porte, June 6. The occasion was one long to be remembered. After an address by Prof. Moran, of Purdue University, a representative from each township, gave an original recitation, the prize being an unabridged dictionary. Then came a sumptuous picnic dinner and following this came various games, such as running, jumping, hopping, ball throwing, sack race, barrel race, tug of war, etc., etc. The girls participated in the running and the ball-throwing. In all these contests, prizes were awarded. Of course base ball games were played. Trustees were on hand to oversee and direct. O. L. Galbreath is county superintendent.

PERSONAL.

W. J. WHINERY is principal of the schools at Earl Park.

W. C. REDMOND, of the Indiana University, will be superintendent at Mooresville next year.

J. A. CARNAGHY has closed up another successful year at Columbus and has been re-elected.

ALBERT P. MARBLE has been elected superintendent of schools at Holyoke, Mass., at a salary of \$3,000.

MRS. EMMA MONT MCRAE, of Purdue University, is in Europe for her summer vacation. She sailed June 3.

ARTHUR LEE FOLEY, professor of physics in the State University will spend next year at Cornell in post-graduate work.

Miss Mattie Matthews, of Thorntown, has been elected for a fifth year as principal of the north building at Lebanon.

JNO. F. HAINES, superintendent of the Noblesville schools graduated in the department of history at the I. U. with the class of '96.

EDWIN S. MONROE has been re-elected superintendent of the Mt. Vernon schools for a term of *two years* at an increased salary.

ED. R. SMITH, who represents Ginn & Co., and is well and favorably known to Indiana teachers, has gone to Europe to spend the summer.

PRES. W. W. PARSONS, of the State Normal and R. J. ALEY, of the State University will be principal instructors in the Posey county Institute.

SUPT. MALSURY, of the Thorntown schools, and Prof. R. H. Harney, of the Lebanon schools, are conducting a six weeks' normal at Lebanon. It began June 22.

ROBERT J. ALEY, professor of mathematics in the State University, has leave of absence for one year to accept a fellowship in mathematics in the University of Pennsylvania.

R. A. OGG, superintendent of the Greencastle schools, has been elected trustee of Indiana University by the alumni of the institution. This is quite an honor and Mr. Ogg richly deserves it.

MISSSES BETTIE G. GRIMSLEY, Marie Dunlap and Mr. W. R. Harbison, all graduates of the State University, have been re-elected to their respective positions in the Lebanon high school for another year.

JAS. R. HART, superintendent of the Lebanon schools, has been re-elected for two years at an increased salary. This indicates well. Mr. Hart has been spending some time in study at the State University.

MISS CLARA VAN NUYS, of Lebanon, has been re-elected for the fifth time at Elkhart. She is a graduate of the State Normal and has been doing excellent work in history and literature in the Elkhart high school.

FRANK K. MOWRER has been re-elected for a third year as superintendent of the Warren schools. The high school sent out *six* graduates for year just closed, and extends the course of study from *three* to *four* years.

EDWARD G. BAUMAN has been re-elected principal of the Mt. Vernon high school. J. W. D. Butcher will have charge of the department of history and mathematics and Miss Effie Grimes of English and Latin in the same school.

MRS. SARA E. ADAMS, a graduate of the State Normal, and a teacher in the Union City schools for several years, has been in the State University during the past year and has been elected principal of the Worthington high school.

PROF. LOUIS H. GALBREATH, of the State Normal school at Winona, Minn., will join the faculty of the Illinois State Normal University next year to take the place of Dr. C. A. McMurry, who will do "extension" work for the Chicago University.

PROF. HODGIN, of Earlham, has been invited to write a history and civil government of Indiana, for a set of books to be made up of the histories of the several states. He is now collecting the material, and will spend part of his vacation at the work.

H. B. WILSON, of the Salem high school, and Miss Maud Barnes, of Michigantown, were married Wednesday, June 10, at the home of the bride. They will be students at Bloomington during the summer and may be seen at their home in Salem after September 1.

DR. DANIEL B. HAGAR, having served as principal of the Salem, Mass. normal school continuously since 1865 now resigns his position. During this service Dr. Hagar declined several important positions among them the state superintendency of Rhode Island.

MISS FRANCIS BENEDICT, principal of the high school at Worthington, has been promoted to the superintendency to take the place of W. D. Kerlin, resigned. The *Journal* heartily endorses the action of school boards in advancing worthy women to the highest positions.

W. W. BLACK, a State Normal man, and for the last three years superintendent of the Paris, Ill. school, has engaged for the summer term to teach pedagogy in the northern Indiana normal school at Valparaiso. Mr. Black is eminently qualified for such a position.

PROF. MARTIN WRIGHT SAMPSON, head professor of English in the Indiana University, and his wife, accompanied by Professors H. T. and N. W. Stephenson, associates in his department will spend the summer in England and Holland. They sailed on the 18th of June.

W. W. PFRIMMER, the Kankakee poet, is willing to make engagements to visit a number of county institutes. Supt. Pfrimmer's entertainments are *entertaining*, as the writer can testify from personal experience. He recites only original poems. His address is Kentland.

JOHN K. SHERIDAN, a Boone county teacher of promise, has been attending the State University. While acting as umpire in a ball game, he was accidentally struck on the side of the head with the ball. He was carried from the field stunned, and some hours afterward died. He was popular with the students and his death cast a gloom over all the commencement exercises.

MISS MARY E. SPARKS is principal of the Brightwood high schools.

W. F. AXTELL is fixed for another year as superintendent at Washington.

E. E. CARTER will be assistant principal of the Frankton schools for the coming year.

C. L. HOTTEL has been elected superintendent of the Portland schools for a sixth year.

JOHN COOPER has closed a successful year at Brightwood and will continue in charge another year.

W. S. ALMOND has been retained as superintendent of the Delphi schools with E. C. Whitcomb as principal of the high school.

W. W. BLACK has engaged to spend the summer term in teaching pedagogy at the Northern Indiana normal school at Valparaiso. He is a superior teacher.

W. H. MACK, whom Indiana teachers remember with pleasure, is spending this year at Jena, Germany. His new book, *Methods in History*, will soon be published by Ginn & Co.

HORACE S. TARBELL, former superintendent of the Indianapolis schools, but now superintendent of the schools of Providence, R. I., was recently honored by having conferred on him the degree of L. L. D. by Brown University.

WM. A. JONES, the first president of the State Normal school, and the man to whom, Indiana owes more educationally, than to any other man, is now superintendent of the Nebraska State Institution for the blind, located at Nebraska City.

W. B. SINCLAIR, for twelve years past superintendent of Starke county, was nominated by the late Democratic State Convention for superintendent of public instruction. Mr. Sinclair is about forty years old, a graduate of Purdue University, holds a life state license, is one of Indiana's best county superintendents and is a royal good fellow. If Mr. Sinclair should be elected next fall, he would doubtless continue to do what he has heretofore done, devote himself conscientiously and energetically to the discharge of his duties and acquit himself with credit and honor in the position he holds.

MISS LELLA PARR, of Franklin, who has recently returned from Boston, has spent the entire winter in perfecting herself in her favorite study—music. She was a pupil of Charles F. Adams, the teacher of Emma Eames, Mary Howe and other noted singers. She has made a thorough study of the history of music and noted musicians. She has studied musical pedagogy with Leonard B. Marshall, instructor of music in Boston public schools. She brings back to Indiana her increased knowledge and will be glad to make engagements for institute work where she may meet and talk to Indiana teachers.

JOHN JASPER, who has for sixteen years past been superintendent of the school in New York City, has recently been elected superintendent of "Greater New York," (New York and Brooklyn combined.) Mr Jasper has made a good general manager and has attended strictly

business but has not mingled with educators and has done almost nothing for the instruction side of his schools. An effort was made to elect an educational man who was familiar with modern methods of instruction but it failed. What New York and all large cities need, is the Cleveland system, in which one man shall manage the machinery and the other give his entire time to the instruction.

BOOK TABLE.

The Atlantic Monthly, in the course of its correspondence with representative successful public school teachers and superintendents, had the happy thought to ask a selected group of them to write out their professional autobiographies. Half a dozen of these confessions will appear in the July *Atlantic*.

PSYCHOLOGY AND PSYCHIC CULTURE.—By Reuben Post Halleck, A. B. (Yale). Instructor in psychology in the high school, Louisville, Ky. American Book Co., Cincinnati, Chicago, New York. This book has been written for high school pupils. According to ordinary reasoning, the study of psychology is too abstract for immature minds and finds a place only in an academic or college course. The writer in his experience in the Louisville high school for boys, testifies from his own experience, that the leading truths of psychology *can* be given in an intelligible way to pupils under the age of twenty, indeed, he believes they should be studied while the brain is plastic. He has aimed in this volume to present as much of the science as the general student will need. The author has made special effort to enliven the hard and dry facts of his subject by employing illustrations and anecdotes, knowing that it is a psychological truth that facts presented in an unattractive way will not secure attention. The several chapters devoted to the application of physiological psychology are a characteristic feature of the work. These chapters were prompted by the psychological law that *laws are of little use until applied*. The volume aims to present the latest ascertained facts of physiological psychology. It is modern, it is interesting. It must be of great value to the general student, no matter what his special vocation may be. Price \$1.25.

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With water and sugar only, makes a delicious, healthful and invigorating drink. Allays the thirst, aids digestion, and relieves the lassitude so common in midsummer.

Dr. M. H. Henry, New York, says: "When completely tired out by prolonged wakefulness and overwork, it is of the greatest value to me. As a beverage it possesses charms beyond anything I know of in the form of medicine."

Descriptive pamphlet free. Rumford Chemical Works, Providence, R. I. Beware of substitutes and imitations.

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FURTHER COMMENTS ON ROUSSEAU'S EDUCATIONAL IDEAS.

HOWARD SANDISON.

1. *The idea that the association of persons leads to corruption.* Rousseau said : " The breath of man is fatal to his fellows, literally as well as figuratively." This thought has its educational application in suggesting immediately its opposite. It has been well said that *sympathy* bears the same relation to the social world that gravitation does to the physical. The doctrine here announced by Rousseau ignores the great force of sympathy in the education of a human being. Under the influence of sympathy, the powers of the person who is manifesting it are stimulated to expansion, to growth. They are made receptive to the influences of others. They freely reveal themselves to the scrutiny of others, thereby providing the best conditions for comprehending them, discovering their needs and guiding them. Under the influence of sympathy, also, the person toward whom it is manifested, exhibits fully his true nature, his disposition and his needs. There is stimulated in him, likewise, added power and increased zeal in helping the person who exhibits the sympathy.

The doctrine that associations are detrimental, ignores, likewise, the great force of *imitation*. If one person of a group exhibits any excellence, through the mere imitative tendency, the others move toward the same excellence. The doctrine fails to recognize the presence of *grace* in the world. If, in an organization like the school, one of the pupils performs an act or

expresses a thought beneficial to the others, it awakens in each of the others a disposition to confer upon him a like benefit. In return, therefore, for his helpful thought or deed, he would receive the accumulated help of the entire school. This is *grace*. The aid coming thus to any pupil in a school is very great, because each pupil is the representative of a social unit—as the family—differing in certain respects from the social unit represented by each other pupil. In every family, some one thought is dominant ; some one mode of activity prominent. In one family the bent may be toward history and all things pertaining to it. The child from this family, when such questions were under consideration, could contribute most in regard to the Turkish question, to the Venezuelan difficulty, to Germany's position in regard to the Transvaal. Another family is pervaded by the spirit of art. The child from that family would be of most assistance in the discussion of Gothic Architecture, etc. In another family the religious spirit is dominant. The pupil attending school from this family would be most helpful in whatever consideration of religious topics found place in the work of the school. Another family might be controlled by the spirit of modern science ; another might be one in which machinery is the prominent topic, and another, trade. Thus each child would contribute that which he was most fitted to give, to receive in return the accumulated benefits of the entire organization. It is association in evil society only, that corrupts. And even evil society must pretend to be laboring for unselfish ends ; for some universal interests, because it is the doom of evil things to be continually annulling themselves. The thought that association in society is corrupting, has its educational application through the truth of its opposite. Perceiving the truth of its opposite, the teacher should increase in the child's mind a high estimation of his associates by showing that they are instruments of grace in freeing him from ignorance and selfishness. One of the strong claims in support of the value of the free public schools, is the claim that through association the child is made free from his selfishness. The isolated individual grows in selfishness. This is the one disadvantage of being the one child in a family.

2. *The idea that the institutions of society should be practically disregarded or abolished.*

Rousseau regarded the regulation of society as chains. He

looked upon them as not only artificial, but as hampering. He lived in an age and in a nation in which this could be said with too much truth. Here again, however, these artificial and unjust institutions work constantly and silently for their own overthrow, by asserting that institutions should be natural and not artificial ; that they should be just and not unjust ; and by claiming that such was the condition of the then existing institutions. Evil is always its own enemy and its own punisher. This doctrine of Rousseau, likewise, has its educational application in the strength of its opposite. The teacher should, therefore, endeavor greatly to build up in the minds of his pupils the thought that each regulation of any organization of society *reflects the need of the individual belonging to it* ; that the school, like all other organizations of society, holds before its members their ideal ; that any given regulation in the school, as the requirement to be prompt and regular in attendance, the requirement of industry, the rule providing for silence during study hours, the rule for attention and co-operation in recitations, exists, not for its own sake, not for the sake of the record, but for the sake of the school authorities, not for the sake of the teacher, but for the sake of the pupil who obeys it.

3. *The idea of Rousseau that the really happy state is one of ignorance, indigence and innocence.* Ignorance is the same as blindness, hence it hampers action. It is deviation of all the joys of knowledge as well as of all its incentives. It is, itself, a lack, that is, a punishment. One cannot say that a person who is ignorant of Longfellow's poem Evangeline is blameworthy, if the lack is in no way due to his want of effort ; yet one can say he is punished. It was a clear insight of Dante in making this thought the basis of Limbo, with its noble castle, silvery streamlet and hemisphere of light. The inhabitants of Limbo were the sages who lived and worked prior to the time of Christ, together with many women and infants. They were beyond the river Acheron, within the confines of the Inferno, although they were unjudged by Minos. This shows they lacked guilt. They did not, however, lack deprivation. Their knowledge did not include the idea of man as *divine-human*. In the elements of their knowledge they *lacked the ideal portrayed by Christ*. This lack was their loss, their punishment. Ignorance is always and necessarily a punishment.

Indigence is not in itself a credit, although at one time it seems to have been so esteemed. Its opposite is a great aid to reaching one's ideal, provided it is sought merely as a means. If the teacher comprehends these thoughts in regard to ignorance and indigence, and if he perceives that mere *innocence* is a state out of which one must grow in order to become really a person, and that knowledge of right and wrong is the true condition of that struggle which produces *true innocence*, he has within his grasp the pedagogical bearing of the doctrine in question.

4. *The idea that moral development requires that the child should receive his education without having the thought even broached to him of obedience.*

There are many people who practically identify the meaning of the words disobedience and liberty; obedience and bondage. Very few things are more helpful to the pupil than a perception of the truth that true obedience is true freedom. Real freedom is obedience to law. This may be in the first instance what seems to be external law. Finally, however, it must be the law of his inner being. The pupil must become familiar with the thought of himself as consisting of two persons—a lower self and the higher self. He must be led to see that the highest freedom consists in an obedience of this lower to this higher self. Very few of the world's thinkers have been gifted with a clearer comprehension of this question of freedom than Goethe. He saw the close relation of obedience to reverence. That for which one has reverence is to him an ideal. It is, therefore, a thing which gives law to his present being. He fulfills his duty and is truly obedient if every act is one in harmony with his ideal; in harmony with this thing towards which he exhibits reverence.

Goethe gave to the world a valuable contribution in showing that this reverence is three-fold, and that, therefore, obedience is of three kinds. He gave greater value to this contribution by showing that these three kinds of reverence represent three stages in the growth of thought; and that the true reverence is one which harmoniously combines the three; and that true obedience is the corresponding characteristic. In the tenth chapter of Wilhelm Meister's Travels, he sets forth the attitude by means of which the three kinds of reverence are indicated, as follows:

“The youngest laid their arms crosswise over their breasts and looked cheerfully up to the sky; those of middle size, held their

hands on their backs, and looked smiling on the ground ; the eldest stood with a frank and spirited air, their arms stretched down ; they turned their heads to the right, and formed themselves into a line ; whereas, the others kept separate, each where he chanced to be."

Later in the same chapter he exhibits what is signified in these words :

"Three kinds of gesture you have seen, and we inculcate three-fold reverence, which, when commingled and formed into one whole, attains its highest force and effect. The first is reverence for what is above us. That posture, the arms crossed over the breast, the look turned joyfully toward heaven ; that is what we have enjoined on young children, requiring from them thereby, a testimony that there is a God above, who images and reveals himself in parents, teachers and superiors.

Then comes the second reverence for what is under us. Those hands folded over the back, and as it were, tied together—that down-turned smiling look announce that we are to regard the earth with attention and cheerfulness ; from the bounty of the earth we are nourished ; the earth affords unutterable joys, but disproportionate sorrows she also brings us. Should one of our children do himself external hurt, blamably or blamelessly ; should others hurt him accidentally or purposely ; should dead, involuntary matter do him hurt—then let him well consider it, for such dangers will attend him all his days. But from this posture we delay not to free our pupil the instant we become convinced that the instruction connected with it has produced sufficient influence on him. Then, on the contrary, we bid him gather courage, and turning to his comrades, range himself along with them. Now, at last, he stands forth, frank and bold, not selfishly isolated ; only in combination with his equals does he front the world. Further, we have nothing to add."

The educational application of such thoughts is too evident to require comment. It is seen that the teacher should first instill the idea of obedience to external authority, and passing from this, obedience to the inner ideal.

The tendency of all explanations should be that obedience is freedom ; that pupil and teacher, alike, owe obedience to the lawful conditions of their environment ; and that only through obedience can freedom arise.

5. *The idea that the mind is to be kept free from religious thoughts during the first ten or twelve years.* On account of its inherent self-activity, the mind of the child, necessarily, would be acquiring ideas and habits of the religious nature during these ten or twelve years, and, therefore, the teacher should be consistent in showing those evidences of an infinite intelligence that are found in all the realms about the child, in-so-far as he is able to comprehend them. The teacher should show that the idea of unity of this infinite being with the child is the incentive of his improvement and his obligation to grow like unto it. This is needed in order to increase his ability to walk in the paths of truth and justice, because such progress is dependent largely on the perception that there is the same intelligent invariable order in the moral world that is hinted in the physical.

6. *The idea that nature and all things to be investigated are to be studied at first hand.*

The debt of the educational world to Rousseau for insisting so strongly upon this doctrine, is very great. Modern educational thought seems to be practically at one with Rousseau in this respect. The great emphasis that he gave to the thought that the child himself should be studied; that his disposition is peculiar; that his mode of thinking any subject is different from the mode of the mature person, seems to be fully recognized in the educational movement of the day, entitled Child Study. The history of the origin and development of modes to be pursued in the study of the child, and hints to be sought in such study, could not be written, omitting the name of Rousseau. His doctrine that sense-perception is the great activity to be cultivated in education, and that the ideas of sense perception are more true than general notions, seems quite out of harmony with modern educational thought. Such is likewise true of the value that he attaches to passivity, and of his advocacy of a period of waiting in which the mind was to do nothing.

Present educational doctrine seems to find greater truth in Plato's idea of the relative value of the different acts of apprehension, as shown in his example of the divided line at the end of the sixth book in the Republic. In this illustration, Plato ranks sense-perception as the lowest but one, of all mental activities—the lowest being that conjectural certainty arises in the perception of shadows, images and reflections. He regards the objects of sense-per-

ception—that is, those that are usually termed real objects—such as the actual tree, the actual animal, etc., as less real than the force or energy that produced them; as mere images of this essence of this law; as mere imperfect objectifications of their underlying ideal.

7. *The idea that books are of but little value, and should be ignored or slighted in education.*

This thought of Rousseau may be concurred in to the extent of asserting that the book should be regarded as an instrument in the investigation of the real thing it is supposed to deal with. Rousseau's disregard of books, however, seems to have had in it this fallacy—that the actual fact which, according to his recognition, and also according to modern thought, is to be gotten at directly if possible—is a completed thing. A fact is not, however, static. No one state of it exhibits it in its fulness. It is always a growing thing. The examination of a real thing at any given time, can reveal merely its condition at that time.

This condition must be comprehended and placed in books in order to be preserved. The same must be done with its next stage, etc. Herein lies the great value of books. They are indispensable. Rousseau made the educational world rich by enforcing upon it the thought that books cannot take the place of the examination of real things. He did not, however, emphasize the idea that every fact is dynamic; that it has had its stages of development, and that, therefore, it has a history, and that the function of books is to garner all that has been learned concerning its growth in the stages preceding its present condition, which present condition is to be examined directly.

PUBLIC SCHOOL DRAWING.—II.

W. T. PARKS.

Our lesson this month will be the cylinder and applications, First, procure a good model. Make one of pine, three or more inches in diameter, and twice as long; or melt one end off a can and put in wood heads, made of half-inch pine. Cover the model smoothly with white paper, and drive a tack in the center of each end; also drive two tacks in the ceiling, or other convenient place; with two strings the model can be placed at all heights and

positions relative to the eyes. The eyes should remain in one position and be the same distance from the model (say at least two feet) at all times. Raise or lower the model as required. Of course one may take any position relative to the model or object,



but such position must not be changed until the drawing representing it in that particular position to the observer, is completed. Represent the object exactly as it *appears* and *not* as you *know* it is; and be very careful not to draw more than you see in one position. There are two kinds of drawing, geometrical and

pictorial; the former represents things as they are, the latter as they appear; we are representing them pictorially.

Try to see objects as a whole; it often assists partly to close the eyes and look through the lashes, as it were. There are no lines in nature; lines in drawing represent edges, boundaries, etc. Lines representing the nearer edges of objects should be broader than those representing more distant edges. In drawing spherical objects we used curved lines only, in the cylinder straight lines are also used. A few minutes each day spent in making straight lines parallel to each other and in making ellipses and circles will prove most helpful. Most of the illustrations here represent objects below the level of the eyes, as they are usually seen in that position; yet one learning to draw should practice them in every way imaginable. Figure 4 represents a vertical cylinder, the bottom being on a level with the eye. Notice that the lower edge is straight and that the upper curves upward. If the cylinder be raised six or seven inches it will appear as Figure 5. Observe that the upper edge of 5 curves upward more than that of 4; also that the lower end appears as an ellipse instead of a straight line as in 4, and that the ellipse is much longer than broad; the same will be seen in the top of the barrel, cup, hat-box, etc. We know that the ends of cylinders are circular, but it would not be proper to so represent them in drawing unless the observer is looking squarely at the end of it and it is so placed that he cannot see the sides. Figure 6 represents such a view. If you ever stood near the hub of a buggy wheel and happened to look down, no doubt you noticed that the wheel seemed broader than tall; again, if you have observed closely the wheels of a departing or an approaching vehicle, you must have noticed that they appeared taller than broad. Wheels are only very short cylinders placed horizontally. After studying vertical cylinders below the level of the eyes, study and draw them above; also place them horizontally both to the left and right, and draw, etc.

There can be no lack of material for study, it is all around you; tumblers, buckets, tubs, barrels, kettles, stove pipes, factory chimneys, telegraph poles, posts, stumps, etc., etc., are all cylindrical.

ANOTHER WORD IN BEHALF OF THE TEACHER.

PRES. J. A. JOSEPH.

Much respect and honor are due those men who stand at the head of Indiana's educational system. Their zeal is good and with few exceptions, their purposes are the same. Our educational system is progressive and progress implies blunders. I feel certain that I will be accorded a hearing in the utmost good feeling if I mention what I think to be two blunders, or, rather, one blunder and one act of injustice purposely committed.

A few weeks ago, the superintendent of a progressive county stated that sixty-five per cent. of his teachers could not pass the examinations but must be favored if they secured license at all. I think the per cent. is placed rather high, but am certain that many teachers must be so favored. It is right they should be thus favored; it is no fault of the teachers that such is true. They are forced to study one thing while they are examined in another. It is the fault of the leaders who have gone wild on methods and forgotten academic work. No teacher can teach well who does not know his subject well.

'Teacher' Institutes too often deal in such a profound and metaphysical way with simple subjects that the thought is obscured in its philosophic presentation, and the humble teacher, ignorant of its nomenclature, gets little but husks from a feast that was intended to be soul-filling and inspiring. Let both academic work and method be given, the former in a greater amount and teachers will know and teach. As the editor of the *Western School Journal* says :

"The philosophers whose abiding place is far up in the cerulean are still preaching to us about the glories of the ideal institute, and are still insisting that 'academic instruction' should have no place in the course. But while the philosophers are speculating in the clouds, the conditions are here on earth, and must be met by superintendents, conductors and instructors. Academic instruction should and must be given, and the instructor who cannot combine that with professional work should join the philosophers in the clouds. "

The reader will pardon me for the following illustration, I am sure. The present year there have been nearly one thousand students in our school studying methods, but they have been graded to the work carefully and required to master the branches

before doing complete work in methods. Nearly one thousand others have been preparing for method work by first making a thorough acquaintance with the branches themselves. We find this plan good. The results are most satisfactory. On the other hand we are lead to feel that Indiana's "hobby" is not producing the greatest good. This is evidenced by the fact that there is a tendency to desert it, but we must not swing too far from the method work, or go to any other extreme.

Now as to Blunder Number Two, (I call it blunder through charity,) a blunder that establishes a precedent most dangerous to the teachers of Indiana. Law is for teachers, officers and all. When one of our leading officers ordered the superintendents of the state to *give* license to each of ninety-five would-be teachers of the state, he wronged 15,000 *tried* teachers who had earned their laurels; and, strange to say, only a few superintendents had courage to resist the outrage. Why should a state superintendent break law, the very man to sustain it and keep within its bounds?

Who were these ninety-five untried young men and women that an unprecedented and unlawful act should be necessary to their welfare? Had their four years' course in college unfitted them to be men and women of nerve that the state must nurse them for two years? Of course the examinations are hard, but all should pass them or none should. What is to hinder this same officer from exempting other "pet" teachers from examination? If he can say who shall have license what is the use of examinations, county superintendents, legislatures, law? What man, who desires to follow the great calling of the teacher, is safe when men can so wrong others? A lesson, severe and lasting, can here be taught the educational people of the state. Many useless and pernicious laws are to be asked of the legislature next winter, laws that will wrong the tax-payers, the teachers, the pupils. When men, especially teachers, vote, they should know that the candidate voted for is a friend of all the teachers and not of ninety-five only, that that legislator is a friend of all schools and not of a certain school only, that all are men that will encourage all men and women, all colleges, state and non-state, to work for the greatest good to the greatest number. State schools should be amply supported. I take pride in the success of our own, but I am sorry to see it necessary to secure success through any means but merit. My hat is still off to the common school teacher.

THE VALUE OF TYPES AS CENTRAL TOPICS.

CHARLES A. McMURRY.

In the selection of important topics in any study, those objects or illustrations of principles and laws should be deemed most valuable which are the best types. The word type itself expresses the representative character of an object. The type form is that which embodies a general or universal quality, which repeats itself in a large series of instances. If we can find those examples which are not only interesting topics in themselves, rich and varied in instruction, but illustrate in almost perfect form the characteristic idea which appears in hundreds or thousands of other similar cases, we shall have topics which are at once rich and fruitful in two directions. For example, in studying the biography of Samuel Adams, especially in the period from 1760 to 1780, we shall find by a full and intimate acquaintance with his personal history and labors during that period an extremely interesting and instructive piece of personal narrative. It is a life full of stirring and striking scenes in which he figured. He was fighting skillfully a long and difficult battle with able enemies. Considered simply as a piece of personal history, it has all the interest and suggestiveness of a romance. But when we find, by a wider survey of the times and people among which he lived, that he is only the representative, only the type, of hundreds and thousands of sturdy Yankees—simply an independent, resolute defender of the rights of the common people—the understanding of his character and life in the midst of this great revolutionary struggle is almost exactly equivalent to a clear understanding of the whole New England people and their attitude toward England in 1776. Samuel Adams is only a more striking and forcible exponent of that spirit of sturdy independence which characterized the descendants of the Puritans at that time. If, therefore, we wish to get a true and deep insight into the spirit and impulse and character of New England at this time, it will pay to make a fuller narrative study of the life of such a man as Samuel Adams. If, then, we could compare this man with John Adams, James Otis, John Hancock and Warren, this comparison will help us to strip away the purely personal qualities of one man and bring out the characteristic spirit which animated him in common with others.

Second illustration : In the detailed, descriptive study of the Hudson river, from its source in the Adirondacks to New York bay, we have a geographical topic which is rich in varied scenes and interests which we can only suggest in outline. The deep, narrow lakes filling the gorges of the forest-covered mountains ; the dashing mountain torrents tumbling down through the narrow valleys till they emerge into the plains and unite to form the Hudson ; the falls and water power of the upper course ; the lumbering and factories ; lower down the navigable part of the Hudson, with its cities, river commerce, railroads skirting its banks on both sides, with the grand scenery of its highlands and palisades ; New York city, with all its shipping and commerce—all these, if worked out in detail, present a very fine series of panoramic views. The whole subject, including also the Mohawk and the canal, is a very instructive topic in geography. But more significant than all this is the great fact that it is a type of rivers.

A comparison of the Hudson River with the Rhine, the Elbe, Thames, the Nile, the upper Mississippi, the Penobscot, the James and so on through the whole list—such a comparison, even if it is briefly made, will show striking resemblances between the Hudson and other navigable streams. It is not necessary to study many rivers in such detail with such full descriptions as that suggested for the Hudson. The same story would repeat itself so often as to become monotonous. But it is well worth while to make a fuller study of several great characteristic rivers. The Colorado River, for example, is the great representative canon-making stream and on this basis should be compared with other rivers of the same class. The Amazon is the best type of tropical rivers, the Nile of irrigation, the Hudson of commerce and scenery and drowned valleys, the Mackenzie of frozen Arctic streams. Instead of learning a few barren facts about every river, big or little, mentioned on an ordinary geographical map, would it not be manifestly better to make a full study of a few type-rivers, each one worked out with a fulness which makes it genuinely instructive and interesting.

The following is the third example:

The life history of a butterfly (the milkweed butterfly as described by Scudder) is a full history of the life and processes of change from the egg, through caterpillar, pupa to imago or perfect insect. Such a complete description and observation of the

progress and changes in butterfly life, and of the food at different stages, the influences of seasons, the migrations, the egg-laying organs and structure of parts, colors and adaptations of parts—all this is exceedingly instructive to children and strongly attractive. But such a study of a single kind of butterflies through the season and through the life-changes and processes, may be seen, by a little comparison, to be typical of all kinds of butterflies, and of many kinds of insects, as moths, flies and silkworms. The study of one small class of insects reveals so much of insect life in its general phases that a deep insight into a great variety of insect life and habit may be clearly typified by the careful study of a few. It is certainly much wiser to make an experimental study of a single kind, tracing out fully the changing epochs of insect life.

The conclusion drawn from these three illustrations taken from history, geography and nature study is, that greater care should be taken in the selection of leading types in these studies, a less number of topics should be attempted in the class, but those attempted should be enriched by much greater depth and variety of material than is now customary. This is one means of enriching and deepening the treatment of school studies.

COMMENTS ON THE TEMPEST.

JONATHAN RIGDON.

In this fourth act, we find, partially concealed of course in artistic expression, an essay on *true love*. This is the theme of the act. It might appropriately have been called the final philosophy of domestic felicity. Instead of the ordinary form of the essay—which most likely Shakespeare could not have produced, at least he never did—he gives animation and realistic appearance to it by putting its thought into dialogue. In the dialogue, we have not only the wisdom of Prospero, but also that of the queen of Olympus and her associate goddesses. Shakespeare looked upon love as so all-important in life, that, to give unquestionable authority to his conceptions of it, he puts the expression of them into the mouths of Prospero and the all-wise immortals.

Prospero's first thought is a warning to Ferdinand not to break the seventh commandment. Instead of the ordinary strictly reli-

gious moralizing on this point, Shakespeare, a profound student of human nature, uses his unerring knowledge—possibly also his experience—to hold up the strictly natural consequences to husband and wife, of any violation of the fundamental law of love.

“Then, as my gift, and thine own acquisition
Worthily purchased, take my daughter: but
If thou dost break her virgin knot before
All sanctimonious ceremonies may
With full and holy rite be minister’d,
No sweet aspersion shall the heavens let fall
To make this contract grow; but barren hate,
Sour-eyed disdain and discord shall bestrew
The union of your bed with weeds so loathly
That you shall hate it both: therefore take heed,
As Hymen’s lamps shall light you.”

Next, after Ferdinand’s solemn promise to keep his love as pure as it now is, the wise Prospero further warns him along the same line to be ever on his guard against the sins of the flesh, and instructs him that animal impulses, if encouraged, will become strong enough to break the best resolutions.

“Look thou and be true; do not give dalliance
Too much the rein: the strongest oaths are straw
To the fire i’ the blood: be more abstemious,
Or else, good night your vow.”

Next we have a grand celestial celebration of this union of true love. In this celebration, the immortals, Juno, the goddess of well-regulated married life, and Ceres, the goddess of agriculture, take prominent part—the interpretation of which is, as I understand it, Shakespeare is declaring that where true love is, there also will be happiness and material prosperity.

“Ceres, most bounteous lady, thy rich leas
Of wheat, rye, barley, vetches, oats and pease;
Thy turfy mountains, where live nibbling sheep,
And flat meads thatch’d with stover, them to keep;
Thy banks with peoned and twilled brims,
Which spongy April at thy hest betrimms,
To make cold nymphs chaste crowns; and thy brown-groves,
Whose shadow the dismissed bachelor loves,
Being lass-lorn; thy pole-clipt vineyard;
And thy sea-marge, sterile and rocky-hard,
Where thou thyself dost air;—the queen of the sky,
Whose watery arch and messenger am I,
Bids thee leave these; and with her sovereign grace,

Here on this grass-plot, in this very place,
To come and sport—her peacocks fly amain:
Approach, rich Ceres, her to entertain."

Ceres, who controls all worldly prosperity, asks Iris—

"Why hath thy queen
Summon'd me hither, to this short-grass'd green?"

And the answer comes from the skies and from Shakespeare—

"A contract of true love to celebrate;
And some donation freely to estate
On the blest lovers."

To make us doubly sure of his meaning, Shakespeare further
makes Juno say to her sister goddess, Ceres:

"Go with me
To bless this twain that they may prosperous be,
And honor'd in their issue."

Then both of these immortals sing their blessings upon the true
lovers.

Juno.— Honour, riches, marriage-blessing,
Long continuance, and increasing,
Hourly joys be still upon you.
Juno sings her blessing on you.

Ceres.— Earth's increase and foison plenty,
Barns and garners never empty;
Vines with clustering bunches growing;
Plants with goodly burthen bowing;
Spring come to you at the farthest
In the very end of harvest.
Scarcity and want shall shun you;
Ceres' blessing so is on you.

Iris also explaining what it all means in—

"You nymphs, call'd Naiads, of the winding brooks,
With your sedged crowns and ever-harmless looks,
Leave your crisp channels, and on this green land,
Answer your summons; Juno does command:
Come, temperate nymphs, and help to celebrate
A contract of true love; be not too late."

The remainder of this act is devoted to the conspiracy on the
part of Caliban and his two associates against Prospero. Prospero
had temporarily forgotten it, but when it recurs to him he speaks
the suggestive words to Ariel:—

"Spirit, we must prepare to meet with Caliban."

These words are of universal application. Every human being can speak them to his spirit nature. Ariel replies—

“Ay, my commander: when I presented Ceres,
I thought to have told thee of it; but I fear’d
Lest I might anger thee.”

To me this reply means that while it is well enough to court the blessings of Ceres, the goddess of worldly or bodily prosperity, we must do it without making this our main object of life. In our struggle to provide for the well being of the body, we must be mindful also, and to a greater degree of the welfare of the spirit. Even while we are seeking natural well being we must do it, not as an end, but as a means to spiritual being. Here then is another bit of Shakespeare’s philosophy of life. We must seek—

“Earth’s increase, foison plenty,
Barns and garners never empty.”

but while we do it we must be on our guard lest such things become the end of life. That is, we must prepare to meet with Caliban.

Reflecting that his work on the enchanted island is about at an end, the wise Prospero is impressed with the insubstantial and fleeting nature of all things that we ordinarily regard as great. The spirits that he has called forth to do his work.

“Are melted into air, thin air.”

This thought calls forth from Prospero one of the sublimest passages anywhere to be found in literature.

“And, like the baseless fabric of this vision,
The cloud-capp’d towers, the gorgeous palaces,
The solemn temples, the great globe itself,
Yea, all which it inherits, shall dissolve,
And, like this insubstantial pageant faded,
Leave not a rack behind. We are such stuff
As dreams are made of; and our little life
Is rounded with a sleep.”

It is *not* the “number work” and its correlative studies that count for or against your value as a teacher, but the impress you leave upon the characters. Therefore waken the sleeping conscience, open the wide doors of thought, rouse interest, and inculcate principles of right and of beauty. Develop and train for the good, the pure, the true, the beautiful—teaching the Eternity.

THE NORTHERN LAKE BOUNDARY.

I. To 1783.

[*Studies in American History by James Morton Callahan.*]

Some part of the inland waterways which stretch along our northern border was the scene of warlike movement from a time previous to the first discovery of Lake Champlain till the close of the war of 1812. Champlain found the Hurons fighting the Iroquois. His judicious interference in their quarrels served afterwards as a factor in extending English influence towards the Great Lakes, and induced the French to push their discoveries along the western part of these waters, and into the country drained by the Mississippi and its branches. The French thus obtained control of the fur trade of the upper lake region. But the Iroquois found it profitable to carry beavers of the northwest to the English at Albany, so they determined to wage war against the Indian tribes of the upper lakes, to seize Mackinaw and to drive away the French, in order to get this work in their hands. But their attempt was unsuccessful. The English, too, had begun to establish posts in the northwest in the region of Mackinaw, and it became evident to the French that the Iroquois were the mere agents of the English. English traders were passing back and forth between Albany and Lake Ontario, and their trade with the Iroquois was increasing. The French in Canada, saw that, in order to retain a monopoly of the fur trade, they must destroy the source of the supply to the Iroquois. Thus grew up the question of whether France or England should control the lakes and the northwest, and the conflict between Indian tribes was transferred to two great nations.

Soon after the colonization movement west of the mountains began, the English were thrown into contact with the French in the region between the Ohio river, the Mississippi river, and the Great Lakes. The contemplation of future possibilities was awakening the consciousness of the English people as to the importance of this region and of the Great Lakes. The French had the advantage of settlement, but Anglo-Saxon determination was invincible in the establishment of new homes. The last great conflict between France and England in America was at hand. It was a final struggle for supremacy on the new continent. Many of the scenes of the war were upon the lakes. They were found

important in war, as well as in peace. It was by descending the St. Lawrence from Lake Ontario in 1760, Amherst rendered it impossible for the French to retire westward from Montreal, and to prolong the war on the shores of the lakes. Securing control of the lakes was a vast step toward the realization of the victory by which England was given control of all the territory east of the Mississippi and north of the Great Lakes.

But England had achieved the conquest of the Ohio valley not for herself. She was simply the trustee through whom it was transferred "from the France of the Middle Ages" to the free people who were making for humanity a new life in America. It was for the liberty-loving colonist that it had been won. He had battled with the forest, and won it for the masses of population which were to follow. He had pushed the border westward, so that the possibilities of the future might be seen. He was working out the problem that others had talked about.

Intercourse with the west and northwest was now more important than before. The project of an improved water communication between the Hudson and Lake Ontario, by way of the natural streams, and the carrying places for the advancement of Indian trade, was discussed. Washington had made observations which caused his mind to appear "absorbed and devoted to the mighty object of forming a navigable intercourse with the western country and the lakes." He thought the fur trade could be drawn toward the Potomac.

But it was not till after the revolution that these ideas of closer connection with the west were to be realized.

When the idea of independence from the rule of England had become a part of the consciousness of the people of the United States in 1776, there was no definitely defined limit to the territories of the new nation. The Quebec Act of 1774 had declared the country between the Ohio and the Great Lakes to be a part of Canada.

The new states had a good reason to claim western lands; but the land north of the Ohio was *de facto* a part of Canada. The marching of an army into it was really an invasion of Canada, and this was not favored by the Continental Congress at the beginning of the revolution. After Ethan Allen took the fortified places on the borders of Lake Champlain, and the armed sloops and boats upon its waters, he suggested to the New York Con-

gress that this key should be held, and that "if the colonists would push two or three thousand men into Canada, they might make a conquest" of it. He spoke of the value of establishment upon the frontier farther north. But the New York Congress had disavowed hostile intentions against Canada, and they now assured her so by letter. The Continental Congress gave the same assurance. But, in less than three months after the battle of Bunker Hill had helped to ripen the aggressive spirit of the nation, an expedition was ordered against Canada. It might have been a success when Allen wrote, but it proved a failure at the time it was planned.

But the Americans were more successful in their attempt to conquer the territory between the Ohio and the lakes. Clarke succeeded in the northwest, whereas Arnold and Montgomery failed in the north. The British were fully awake to the importance of holding the region between the Ohio river and the lakes. After Spain declared war against Great Britain (May 8, 1879), Lord George Germain, Secretary for the Colonies, wrote General Haldimand of it, and ordered him to reduce the Spanish posts on the Mississippi. This was the last concerted action of the British to regain possession of the west; and it failed on account of the activity of the Spaniards under Governor Galvez, and through the energy of Colonel Clarke. If this western scheme of the British had been successful, the country north of the Ohio might have remained a part of Quebec. If this had been the condition in 1782, it is quite probable that the United States would have been shut out from the lakes and the Mississippi. Thomas Jefferson saw the importance of Clarke's expedition to the Wabash before it was made, and wrote that if it proved successful it would "have an important bearing ultimately in establishing our northeastern boundary." America had begun to look forward to her "manifest destiny" in the north and west. France feared this.

The French always had fears of the American love of conquest. In 1778, in discussing an attack on Canada, the French minister discouraged it. It seems to have been the settled policy of the French court from the beginning to prevent the United States from getting Canada. Mr. Morris saw that France favored Spain by wanting Canada to be held by the British, so the United States would be diverted from Spanish territory, and he said it was useless, for both England and the United States would be hostile to

Spain. He then thought England would be master of the lakes, and a natural friend of the Americans.

Though Spain rendered valuable service by helping Clarke to hold the land he had conquered until the treaty was drawn up, she did this through no unselfish motive. In 1779 Spain had wished that the northwest should be guaranteed to England. In her engagement with France to assist in the war against England, she had demanded a stipulation that left her free to exact from the United States, as the price of her friendship, a renunciation of every part of the basin of the St. Lawrence and the lakes, of the navigation of the Mississippi, and of all the land between the river and the Alleghanies. Spain thought of laying claim to all the territory west of the mountains and as far north as the lakes. It was her ambition that induced her to say that the royal proclamation of October 8, 1763, kept the United States from having any territorial rights west of the Alleghanies.

Thus, at the close of the revolution, the basin of the lakes remained British, and Spain had her eye upon the entire region west of the Alleghanies. It took diplomatic skill to extend our limits to the lakes.

The discussion of what should be our boundaries had been debated in Congress at various times before the close of the war. In a report of a committee of Congress, February 23, 1779, it was stated that certain articles necessary for the safety and independence should be insisted upon. Concerning the northern boundary, it proposed "the ancient limits of Canada, as contended for by Great Britain, running from Nova Scotia southwesterly, west and northwesterly to Lake Nepissing, thence a west line to the Mississippi." On March 19, 1779, Congress agreed to an ultimatum similar to this line. The line from Lake Nepissing was to run from the south point of the lake to the source of the Mississippi. If the source of the Mississippi had been as far north as the Lake of the Woods, as it was supposed to be, Great Britain would, by this line, have been excluded from all the lakes except Superior.

In the instructions of Congress, August 14, 1779, for the minister, it was stated that "If the line from Nepissing to the Mississippi can not be secured without war, you may agree to some other line not south of 45° ." John Adams received the appointment as minister, September 27, 1779, and went to France, but

official influence there was thrown against the initiation of a treaty at that time. His commission was annulled by Congress June 15, 1781, and he was appointed one of five commissioners to negotiate a treaty. This commission was not tied by absolute directions, and did not always follow such general directions as had been given it; but, by wise diplomacy, it secured better terms in the treaty than Americans had dared to expect.

It is not within the scope of this article to enter into the interesting details of the many discussions and arguments at Madrid and at Paris, or even to mention all the proposed boundaries. It can only notice the main features. The attitude of England was largely influenced by questions relating to Spain and France, and was not clearly defined from the beginning. At one time in 1782 there was a strong probability of the cession of all Canada to the United States. In a conversation in April of that year, Franklin and Oswald agreed that occasion for future wars should be removed. They saw that settlers along the long frontier were constantly furnishing matter for fresh differences. Franklin proposed that it would have a good effect if England would voluntarily offer to give up Canadian provinces on condition of being allowed free trade with them. He thought that if England kept Canada the United States would have to strengthen her union with France.

But popular opinion in England was probably against giving up Canada, and the influence of other events made the ministry more determined to hold this territory. The effort to secure the Ohio as the southern boundary was resisted by both Adams and Jay. At the same time, our ministers could expect better terms from England than they could hope to get from France and Spain, who it appears, would have "cooped up" the United States between the Alleghanies and the sea if they could have done so. This led to secret communication with the English ministers, contrary to the expectation of Vergennes, the French minister. Although Oswald favored articles which gave the United States control of the lakes, the British ministry would not assent; and, when the American ministers proposed either the line of 45° or the line through the lakes, the British ministers chose the latter. Fortunately for us, their preference for a water boundary caused them to recognize the Great Lakes as our northern frontier. Doubtless the British ministry saw that there was danger of

Spain's getting the territory south of the lakes, and preferred to let the United States have it. Perhaps neither England nor Spain regarded the treaty of Paris as final. It is not improbable that the war of 1812 revived English hopes of recovering the control of the lakes and the region south of them.

The refusal of England to surrender the posts which she held south of the lakes at the close of the war shows the reluctance with which she agreed to the boundaries. There were English who believed that the "Northwest Territory should never have been ceded to the United States." One writer said the cession was due to Oswald's ignorance of geography. In fact, for several years before Jay's Treaty, merchants of Montreal tried to get a new line of boundary. Various changes in the boundary were proposed, and it was not until the Treaty of Ghent that the boundary through the lakes, and the destiny of the Northwest, were assured.

WASHINGTON, D. C.

MARG.

BY W. W. PFRIMMER, THE KANKAKEE POET.

She wer'n't to say han'some, well, yes she wuz,
Fer han'some, you know, is as han'some does,
But she wer'n't to say purty, that is, her face,
Till you got well a'quainted, looked commonplace.
Folks lived up here in the country apiece,
The ole man holdin' a life-time lease
On a quarter section of mighty pore land,
Three-fourths of it marshes, the rest of it sand,
An' makin' a livin', as one may say,
In a sort of a ketch as ketch can way,
A herdin' cattle an' a cuttin' marsh hay,
A trappin' of musrats, an' varmints like these,
An' a fishin' a little an' a huntin' bees—
Not just egzackly what you call no account,
Though his work, I must say, it didn't amount
To no great sight—A sort of a man
That 'uz built on a good, good-fer--nothin' plan,
But his wife, well, she warn't at all of that kind,
Strange, how many real smart women we find
Hitched up with a second-rate sort of a man,
There's some things in nature we can't understand.
As for Marg, as we called her, their only child,

The girl I'm a tellin' of—she jest run wild,
A reg'lar rollickin' tomboy an' romp,
Frum the red wings' little ones down in the swamp
To the hang-bird's nest in the tallest tree
Everything, anywhere, fer her eyes to see
In byow or bottom land, sand-ridge or sl'ugh,
—Climb to it, wade to it, go in a canoe—
She'd get there somehow, an she's got there—but well,
That is the story I 'uz goin' to tell.
Well, 'long with her pryin' in curious nooks
She got in the habit of peekin' in books.
School house wuz a mile an' three-quartern away,
But Marg wuz jest bound to be there ever'day.
Got to workin' her sums at home of a night
An' the ole man, he grumbled about the light,
Said somethings, I reckon, he did'nt quite mean;
Fer he 'lowed she wuz *wastin'* the kerosine,
But her ole mother said, "O, now, pap, keep still,
An' let the child figger ez long ez she will."
The upshot of it wuz, at about sixteen
There wuzn't a sum eny where's in between
The lids of Ray's Third Part that she couldn't do.
An' she'd parsed her grammar book clean through and through;
Had Uncle Sam's doin's well nigh up to date,
An' ole Cutter hisself would a called her great.
An' her ole mother, well, she wuz jest that proud,
"She's done *middlin' well*," the ole man allowed.
But she purty nigh took his breath away
When she come a coaxin' of him one day
Fer to let her go off to school somewher' .
An' she wanted to go fer a plum whole ye'r,
Well, the old man balked, but her mother said
A talkin' to him when Marg wuz to bed,
"Hit 'pears like to me, pap, that we could afford
To let a child go if she works for her board."
An' so it turned out in the fall she went down
An' put in a year at the county seat town
With the ole man doin' his level best,
The musrats and coons didn't get any rest.
"Hit's the ole woman's doin's," he used to say,
"An' these varmints have got them 'ere bills to pay ;"
Well, when Marg got back with a license to teach,
The ole woman's pride hit went clean out o' reach,
But the ole man, he said, "I'm glad she's through,"
Then Marg, she kept school fer a year or two,
An' our folks kind o' 'lowed she'd marry, but
Ain't there a place down here they call Terre Hut?
Down on the Wabash below Perryville?

Some kind of a school down there where they drill
Folks in the way of school teachin,' ye know.
Well, nothin' 'ud do but Marg she must go
With the ole man a grumblin' an' sayin' his say.
An' the ole woman skimpin' an' savin' away.
An' gittin' up early an' stayin' up late,
Fer to help Marg stay there fer to graduate,
An' she done it someway, but how? I s'pose
They ain't enybody but her 'at knows.
The tickledest woman 'at ever you see!
An' I ain't disputin' her right to be.
"Now," says the ole man, "I ræckon she's done."
But there's a place down here called Bloomington,
South here a piece on the ole Salem road;
There's a school down there that's jest grow'd and growd,
Till folks that know say it's about the best
We can find enywhere, and Marg, she guessed,
When she'd been a teachin' a year or two,
That the very best thing fer her to do
Wuz to go down there in the arley fall
An' jest stay with it till she got it all.
Well, 'long last June she got back agin,
An' I 'uz over that way and jest stepped in
Fer a drink of water, and Marg says, says she,
"Mr. Jones, please stay an' take dinner with me."
An' as it wuz gittin' along toward noon,
An' I says, says I, "I'd jest as soon
As not, bein' it's you," an' so I stayed;
An' the ole folks an' me set out in the shade
An' talked, an' the ole man went on to tell
How he 'us jest about in the notion to sell
"Ye see," sez he, "Jones, there has been such a change,
They've 'ist fenced and fenced till there ain't any range
Fer a herdin' of cattle or cuttin' of hay,
And them drudge boats have driv the musrats away,
An' my eyesight of late is gittin' so pore
That I can't see to line a bee any more.
'Pears like its got so the marshes won't grow
Nothin' but farm craps, an' farmin', ye know,
Ain't in my line; an' its rather late now,
At my time o' life, to be larnin' how,
An' our girl's goin' off teachin' somewhere,
An' we're goin' 'long to keep house fer her.
We've lived here thirty years comin' next spring,
An' it seems like we haint the first single thing
To show fer it all." But the ole woman said,
A shovin' her spectacles back on her head
And restin' her work-wrinkled hands in her lap,

"Yer eyesight duz seem to be failin' ye, pap;
 I'm shore I can't find any room to complain,
 Fer I count more than dollars in countin' our gain."
 An' "speakin'," says she, "of our Margarite,"
 An' her ole face was lookin' so good and sweet,
 "A raisin' a girl like her," sez she,
 "Is a doin' jist well enough for me."

LEND A HAND.

(This department is conducted by Mrs. E. E. Olcott.)

"Look up and not down
 Look forward and not back
 Look out and not in;
 Lend a hand."

A GOOD METHOD.

There was a little schoolma'am
 Who had this curious way
 Of drilling in subtraction
 On every stormy day:

"Let's all subtract unpleasant things,
 Like doleful dumps and pains,
 And then," said she, "you'll gladly see
 That pleasant things remain."

—*St. Nicholas.*

A GOOD PLAN.

With all your planning, have you, like the wise "little schoolma'am," made definite plans for the happiness of your pupils?

Some one has said that one of the noblest aims in life is to make others happy.

You have planned to teach more thoroughly, scientifically and "professionally" this year. But have you resolved that, so far as lies in your power, this coming year each of your pupils, even the dull, the unprepossessing, the common-place, shall have his full measure of happiness?

That kind of work is too ethereal to be graded. Who can record the per cents of the dancing sunbeams?

"The best portion of a good man's life,
 His little, nameless, unremembered acts
 Of kindness and of love,"

says Wordsworth. To be able to make a child rejoice when he

has done his best, even though that best be very poor, is to be a fine teacher. There are pupils who, through no fault of theirs, must always stand near the foot of the class. Yet they have a right to be happy. Have you conscientiously tried to give them the sweet words of approval which they deserve when they have labored hard—"when they have tried and have not won"? There are teachers who seem born to dispense happiness, as there are those who are born to command. But there are many more who must keep this end in view, and apply their psychological lore to the problem of "weaving sunshine" into the daily routine of the school.

A lecturer on physiological psychology dwelt upon developing brain areas. Brain cells, like muscles, increase in power by use; cells not exercised shrink away, and by and by lose their elasticity irrecoverably. The lecturer asserted that cells neglected in childhood and youth could never be fully developed. He pointed out the urgent need of bathing the senses of the young with many and varied sensations, so that their plastic brain cells may remain receptive. Develop the cells that enable them to see, to hear, to touch and to smell, so that they may appreciate the gifts which the bountiful Giver of all has bestowed so freely. The sense of smell is most universally neglected. To prove to his auditors that certain of their brain areas were undeveloped, he invited them to come forward and name certain odors which he had prepared for the occasion. When the test was over, "You have lost," he said, "just so much happiness by being unable to distinguish between the perfume of the violet and the rose." He then read many passages from Shakespeare and other poets containing allusions to odors. "The beauty of these is lost to you," he commented, "if you can not appreciate perfumes. Just so much lost happiness! What a pity those brain cells were neglected."

"Some persons," he continued, "can speak fluently, but can not express themselves well in writing. It is largely because the brain cells called upon to convert thought into written language have not been developed, while those which change thought to spoken words have been exercised. There is a place said to be *paved with good intentions*. It has so much pavement because the brain cells needed to execute good, kind thoughts are undeveloped. I am tempted to say it is wicked not to say and do the

kindly things you think of because those unused brain areas shrink and harden, and ere long you can not be to the world what you might have been !"

Let us take this thought into our school work, and, while we earnestly and enthusiastically teach the "three R's and all their relatives," let us also, consciously and conscientiously, practice and teach the conception and execution of good intentions. The happiness that comes from making others happy may pervade the atmosphere of the most obscure district school, where the pupils are tow-headed, freckle-faced, bare-footed and never saw a railroad, and the teacher, perforce, wears thread-bare clothes and longs vainly for wider opportunities, quite as well as the atmosphere of the most artistically decorated school room in the most favored locality, whose fortunate teacher may attend summer schools and great educational gatherings. Then let us, one and all, plan for the diffusion of happiness, and resolve throughout the year to "Sun us in the light of happy faces."

A METHOD IN SUBTRACTION.

Many teachers find that more "pleasant things remain" and fewer "doleful dumps and pains" are encountered when subtraction is taught by the following method :

It consists simply—when 10 has to be taken or "borrowed" from a higher order—in subtracting first from the "borrowed" 10 and adding the difference to the corresponding figure in the minuend, instead of adding the 10 first and then subtracting. Thus in subtracting 7 from 26, the pupil takes one ten from two tens ; but instead of saying (orally or mentally) "10 and 6 are 16 ; 7 from 16 leaves 9," he says, "7 from 10 leaves 3 ; 3 and 6 are 9." In each case he brings down the 1 and has 19 for the remainder.

The great advantage in this method is that the pupil never deals with any number greater than ten. For him there is *virtually* no 7 from 16, 8 from 17, etc., but instead only 7 from 10, plus 6, and 8 from 10, plus 7. When he has learned the combinations in addition and subtraction to ten inclusive, then he is practically master of all subtraction, merely needing to remember when he has taken a ten from the next higher order.

The chief difficulty to meet in introducing this method is that

the *teacher did not learn to subtract that way!* So prone are we to teach as we were taught that it requires an effort to use a new method, even though it may appear a better way. To those who wish to try this method, I suggest that, by way of preparation, all of the combinations in addition and subtraction to 10 inclusive be by the class which is to begin subtracting problems in which it is necessary to "borrow" 10. They should also have the addition table of 10 at the tongue's end. For the first lesson a numeral frame, with ten balls on each wire, is preferable to bundles of 10 sticks each, though any material for concrete illustration can be made to serve.

Let us suppose that we have a numeral frame (abacus) and the class is going to take 9 from 17. Move out 10 balls on one wire and 7 balls on the next wire. The class instantly recognizes 17. Tell them to take 9 balls away and show them how easy it is to move 9 balls away from the 10 balls, leaving 1 ball on that wire and 7 balls still on the other wire. Thus they see that 9 from 17 leaves 8, though they discovered it by saying 9 from 10, plus 7.

Drill in subtracting 9 from the "teens." Soon it will dawn on the pupils that, since 9 from 10 always leaves 1, the remainder will always be 1 more than the number represented by the unit figure in the minuend. Thus 9 from any number ending in 1 always leaves 2, 9 from any number ending in 2 leaves 3, etc. Next drill in subtracting 8 from the "teens." Now the remainders in the partial answers will always be 2 more than the corresponding figure in the minuend, because 8 balls from 10 balls always leaves 2. They may, if preferred, say 8 from 15, but they are to *think*, "quick as thought," 8 from 10, plus 5. Or, better still, they may almost involuntarily say, "7—because 7 is 2 more than 5."

When they can readily subtract from the "teens," give them a concrete lesson on subtracting from a number containing more than one ten. Thus in 7 from 26, the beads on the numeral frame show plainly the 2 tens and 6 ones or units. When 7 is taken from one of the tens, they see that 1 ten, 3 units and 6 units remain.

The mental picture of the beads helps them in the later abstract work. With the mind's eye, they recall how they took one of the tens when the unit's figure was too small. In their work with the "teens" they became accustomed to "taking a 10," so it

will need but a word of explanation and a warning to remember when the figure in the minuend has been diminished. If preferred, a line may be drawn through the figure as a reminder that the number is now one less than the figure indicates.

$$\begin{array}{r}
 \text{From} \quad 3 \quad 6 \quad 8 \quad 5 \\
 \text{subtract} \quad 2 \quad 7 \quad 8 \quad 9 \\
 \hline
 \end{array}$$

(Since they *know* that a larger number can not be taken from a smaller, and know where the 10 comes from which increases the smaller number, reference to those points may be omitted except with a few slow pupils or in occasional reviews. We may teach the children to say what we wish them to *think* in their silent, accurate, rapid work.)

Process: 9 from 10, plus 5, is 6.
 8 from 10, plus 7, is 9.
 7 from 10, plus 5, is 8.
 2 from 2 leaves 0.

Remainder: 896.

For variety in abstract drill work, I have seen a teacher write horizontal lines of twelve figures each, and time the pupils in their race for answer. They were not asked to read the remainder, which was billions, but the imposing array of figures added considerable "spice" to the work.

This method has seemed to me to be especially good ever since I saw it used by a bright class, who had discovered it for themselves. The assistant superintendent of the Louisville schools assured me that, so far as he or their teacher knew, only their own quick wits had shown this class that it was easier to subtract from 10 and then add than it was to add the 10 and then subtract from the resulting larger number.

They had been taught to add by "breaking tens," and this prepared the way for their discovery, for they clung to the friendly 10, when the subtraction of large numbers confronted them, and were rewarded. It was found that their work was more rapid and far more accurate than that of corresponding grades where other methods were used.

DESK WORK—PUZZLES.

Children are proverbially fond of puzzles.. Just as games of tag, and ball develop the muscles healthfully, so do innocent mental games strengthen thought-power.

- PRINTER'S PI: 1. oLev eon orneath.
 2. ryT, tyr, naagi.
 3. roWk hewil oyu korw
 nAd aply eiwhl ouy yapl.

- ANSWERS: 1. Love one another.
 2. Try, try again.
 3. Work while you work
 And play while you play.

Divide the class into sections, assign each a gem of thought to make pi of; then let the sections exchange and solve each other's puzzles.

Watch the puzzle columns in various periodicals and you will have a generous supply of pi. The following are from the Sunday School Advocate:

1. Eb otn mlipys dogo,
 Eb odog ofr nigemotsh.
2. oLok pu nda nto ndow, kolo rowadrif dan ton cabk, okol uto
 dna ont ni, nad neld a danh.
3. yM nso, fi nrssine cietne ehte tencson utho ont.

CANTALOUPE SEEDS.—A good substitute for the lentils of the kindergarten are cantaloupe seeds. Now is the time to lay up a supply of them. Even when lentils and tiny shoe pegs are among the supply of busy-work material, the seeds give a pleasing variety. The seeds may be used as small pegs are, and are especially good in outlining large designs of letters, words, line drawings, etc. They may easily be gummed or pasted in pleasing forms.

TELL ABOUT

- | | |
|-----------------------------|---------------------------|
| Something that sails. | Something that you jump. |
| Something that is rowed. | Something that you throw. |
| Something that is driven. | Something that you bat. |
| Something that you ride in. | Something that you snap. |
| Something that you ride on. | Something that you catch. |

—*The American Teacher.*

Create, so far as possible, the blessed "home" atmosphere to which every child is entitled—by divine right. So shall your pupils enthrone you in their heart of hearts and rise up to call you blessed through all the coming years.

PRIMARY DEPARTMENT.

Edited by MRS. SARAH E. TARNEY-CAMPBELL, Supervisor of Instruction in the
Anderson Schools.

OBSERVATIONS AS A SUBSTITUTE.

It was near the middle of the forenoon when word came that Miss Jones was sick and had asked for some one to take her work for the remainder of the day. The regular supply teacher was out and it fell to me to take charge of the second and third grade the sick teacher was about to leave. The school in the fall was 2A and 3B and after the mid-year promotion was made 3B and 3A, so the room is virtually a third grade. When I arrived, Miss Jones told me that the work for the entire forenoon was arranged and that Abbie, pointing to a little girl on the front seat, could answer all my questions concerning the work and would help me in any way that I needed. They were just ready for the B's recitation in

NUMBER

There was one problem on the board.—A man bought 3 dozen bananas, gave 16 away, and sold the rest at 2 cents each: how much did he get for them? I asked the boy in the blue waist to take the problem and do with it just as they had been accustomed to do. He stepped out in front of the class, gave one glance to be sure that the class was attending to what he was going to say, and read the problem from the board. He then gave the following explanation: "I know that there were three dozen bananas and I know there are 12 bananas in a dozen. I want to find out how many bananas he had altogether. He had 36 bananas because 3 times 12 bananas are 36 bananas. Now I know the man had 36 bananas, and he gave away 16 bananas. I want to find out how many he had left. He had 20 bananas left because 36 bananas less 16 bananas are 20 bananas. I know the man sold these 20 bananas for 2 cents each. I want to find out how much he received for them. He received 40 cents for them, because 20 times 2 cents are 40 cents."

A little girl who sat on the back seat was then asked to give her explanation of the problem. It was virtually the same as that given by the boy, except that she omitted the word bananas frequently, and said for instance, 36 less 16 leaves 20, and 20 at 2 cents each are 40 cents. When she was through I

asked the class if they had anything to say on her explanation, and several of the class were ready to tell me that in such problems as that, Miss Jones was anxious for them always to put in the word bananas, or any other object that was spoken of. I thought the class might be able to give the work readily on this problem which they had studied for the recitation, but would not be able to do similar work stated differently, or to do rapid mental work, so for a part of the recitation period, I gave them a test in rapid mental work and found that they were perfectly familiar with simple common combinations, and could give the results almost as soon as I finished the problem. This is one— $3 \times 3 + 4 + 5$ made into 6's. I also gave problems involving the multiplication of 20 by 2, and 3, and 4, and subtractions and divisions of those products.

DRAWING.

While the 3B class was having the foregoing recitation in number, the A class had busy work as a preparation for drawing a figure in the drawing books. The teacher had copied the figure on the board and had told them to make a certain line $4\frac{1}{2}$ inches, another 3 inches and another line in the figure $1\frac{1}{2}$ inches. They were then given pegs and rulers to make their figures on the desk. The 3B class had had a similar busy work period earlier in the forenoon, and we were now ready for the lesson in the drawing books. Here Abbie came to my relief. She told me that she would put the drawing books on the proper desks for distribution, that the drawing pencils were in a certain box, and she asked one of the girls to get these pencils and pass them. She said that the rulers were in a certain drawer and then asked a boy if he would get the rulers from the drawer and pass them. There was nothing in the mechanical part of it for me to do. The class understood perfectly the little details of every-day work, and in a very short time indeed, each child had his own material for the drawing lesson. The figure which they were to draw was a trapezium, and simply consisted in drawing the figure enlarged to the required dimensions.

3A GEOGRAPHY.

The 3A classes in our schools have been taking the essential ideas given in "Brooks and Brook Basins," for some time, and observing these particular features in the neighborhood and talk-

ing about them in class, and the teachers have used the book itself to reinforce the work. Not knowing just what work this particular class had had in this line, I told them instead of taking anything in advance, I wanted them to tell me two or three things which they had had in their work from "Brooks and Brook Basins" that they considered most important. I gave them two or three minutes to think over carefully some of the main points. The first child said that she thought one of the principal things that they had studied was the water parting. They showed with their hands and desks what they meant by water partings, told me of different places in the school ground, on the streets, and in town where they had seen water partings. I then asked them how many water partings there were around a valley, a question which had been sent out in a test to the third grade children the week before. Their eyes danced as they recognized the old question and each was anxious to tell me what he had said on examination. One child said he thought there might be any number more than one, another said that she had put on her paper that there will always be two or more water partings around a valley. These are typical of the answers that were given and were sufficient to show that the children had a pretty good idea of the water parting. The second point which they gave that they considered important was that the streams of water carry fine soil from one place to another. They also told me where this soil was gotten, where it was left, and its value to the growth of vegetation. In connection with this we talked of two farms, one rather level and such that the water would not stand on it, and the other very hilly. The question was asked, which of these two would probably be the better farm and why?

SPELLING.

The next recitation was 3B spelling. I had noticed on the blackboard at the back of the room a great number of small white and blue stars. The children told me that there were ninety stars in the group and each star represented a perfect lesson in spelling. They said that they were working for one hundred and twenty stars, and although there were but eighteen days more of school they hoped at least to gain the extra twenty.

The words I found on the board given for that particular lesson were harvest, swing, swinging, velvet, stalk, thistle and inside. The meanings of all these words were familiar (as in most cases

it should be with this grade of spelling work). We talked especially about the hard places in stalk and thistle. We found that in stalk the alk says awk just as in the words talk, walk and chalk. In thistle the hard place seems to be that the letter *t* has no sound at all, just as in the word whistle. The words were then pronounced and the children wrote them on their slates. On looking them over I found that two words had been misspelled, *stalk* by one child and *whistle* by another. The two persons who missed these went to the board each to write his own word correctly, and when he came in at noon he went to a different part of the board and again wrote the word which he had missed in the morning. The class were very much disappointed that no star could be added to the group. This recitation was followed by the noon intermission, lasting from 11:30 to 12:30, at which time pupils are allowed to come into the school room. The regular school work begins at 1 o'clock.

The children began coming into the room at 12:30. The two pupils who had missed the two words immediately went to the board and spelled the words correctly, and the words were then put in the list as a part of the spelling lesson for the afternoon. Other children as they entered came to the table and took books or papers that were lying there for their use, and went to their seats and began to read. Others drew pictures on their slates and paper. Finally one little girl took out her music book and, turning to a familiar song, began to sing. One by one several of the other children joined her, and they sang very softly one or two verses of different selections. After one had been finished a different child in the room occasionally started another song. Some of the children went quietly for the water bottle to clean their slates, and at the same time sang the song with those who were sitting at their seats. Each child seemed to be entirely able to find something that he wanted to do in the period before the regular school work began. I have been in schools where a great part of the teacher's time and energy were taken up during this period answering pupils' questions and trying to give them something to keep them busy and in order, but in this case it seemed as if a teacher were unnecessary, and, if there was any preparation for the afternoon's work which she wished to make, she was entirely free from all annoyance of the children and could give her entire attention to seeing that everything was in readiness for the

work of the afternoon. As soon as the 1 o'clock gong sounded, without a word from me the music stopped, the children who had taken books and papers from the table returned them and everybody was ready to take up the first recitation.

The first afternoon recitation was a spelling lesson with the A class. This work consisted of the spelling of these words : Coward, die, dying, breast, restless and always. The recitation was conducted in much the same way as that with the 3B class in the forenoon. One additional point came up in the meaning of the words die and dying, to make sure that they would not be confused with the words dye and dyeing.

Following this were the language or science lessons—I do not know which to call them ; one class working with the wild cherry blossom, seeing the arrangement of the small blossoms along the stem, the general appearance and make-up of the blossom itself, and comparing it with the tame cherry and apple blossoms, which they had already studied. With the other class the work consisted in the examination of maple seeds, seeing the different parts, their arrangement and the purpose of the little wing to the seed. There was no written work done upon either the cherry blossom or maple seed, but in such work as this the children had been accustomed to talk very freely about the object under examination, and they did so in this case.

For the music I had placed an exercise upon the board which I thought of sufficient difficulty to meet the needs of a third-year class. One little fellow asked me if that was their music, and when I told him it was he remarked that they could do much more difficult work than that. I told him that we might find that exercise more difficult to sing than it looked to be on the board, but he was quite confident that it was too easy. At the afternoon rest a few of the children did not leave the room, and when I came in I found that they were very quietly singing to themselves the exercise which I had put on the board, and singing it so readily and accurately that I found the little fellow was right and the work which I had prepared for music was too easy, so instead at the music period they sang this exercise over but once, and we then took the regular music readers and practiced upon the new exercise which the children said the music teacher had given them to have ready when she should come, two days later.

The B class had another spelling lesson in the afternoon which

consisted of the two words missed in the morning and five others whose meanings were familiar, but the spelling of which was somewhat difficult. This time all the words were correctly spelled by all the class and before I was exactly sure that everything was all right the children were clapping their hands over their success in gaining another star. The other class glanced over in evident appreciation of the fact that their juniors had made what they called a "perfect recitation." Of course I was not skilled in making stars, so the little girl on the corner seat volunteered to find the blue crayon that was kept in a particular box in a particular drawer to be brought out on such gala occasions. She not only did this, but told me that Miss Jones frequently allowed them to make their own stars. Of course I was not slow in asking her to do the same for me, and when the star was put in its place on the board, they were ready to take up the next work.

It is unnecessary to give the entire program for the day. School programs are very much alike, and my purpose in giving these particulars is to show the previous training that this class of pupils must certainly have had. If there is anything in the adage that the teacher should make himself useless to his pupils I certainly think the children under this teacher are getting the benefit of the application of this principle. The teacher's time in this room seems as nearly freed from small mechanical details that almost always go along with good school work as in any school I ever saw.

NOTES AND COMMENTS.

I. The children in the school understood perfectly the mechanical side of the school. They knew when to put their waste paper in a basket, and when to put water on their slates without a specific direction from the teacher. They noticed the clock and occasionally reminded me that the time for the recitation was nearly over. This mechanical side was so familiar as to require no particular thought, which is the end to be reached in every school.

II. The pupils were self-helpful. If they remained in at recess, or if they came in before school in the morning or at noon, without any suggestion from any one they were able to find some-work which they wished to do. This is another great end to be reached. Too often children are absolutely dependent upon the

teacher for even the minutest suggestion as to what they are to do during any period, and, as soon as they forget what was told them or think they have finished the work, proceed to get into mischief. In this school this spirit of self-helpfulness, of self-direction is so thoroughly imbued that it is seldom that mischief occurs.

III. Another secret of the good work, and especially in the number work, instinctively came from one of the children. Three of them volunteered to erase the work from the board in the evening. The number work which the 3A's had in the morning was erased. One little girl remarked that she did not think that Miss Jones wanted that particular problem taken off the board, as they only had two or three problems like that, and she was sure Miss Jones would have left the problem on the board and simply have changed the numbers in it for a part of the next day's lesson. Thus when Miss Jones begins a certain point in her work she holds to that point until the children are perfectly familiar with the principle involved. She has found this fact in teaching, that a point might almost as well not be presented at all as to be presented but once and not referred to frequently. There must be some arrangement made by which this point will come up again and again, if it is to become a part of the child's mental equipment.

IV. Her children were able to talk consecutively on the points under discussion. Refer again to the explanation of the banana problem in the 3B class. Any one who is at all familiar with the ordinary school work knows that that recitation was very different indeed from the kind we usually hear. Instead of the foregoing recitation, we hear questions and answers somewhat like these :

Teacher—What is the first thing you want to find ?

Pupil—How many bananas there were altogether.

T.—What will you do ?

P.—Multiply.

T.—Multiply what ?

P.—Three by twelve.

T.—Where did you get your twelve ?

P.—Twelve things in a dozen.

T.—Very well ; what did you get when you multiplied ?

P.—Thirty-six.

T.—Thirty-six what?

P.—Thirty-six bananas.

T.—Excused. Johnny, what do you want to find next?

P.—How many he had left.

T.—How will you find out how many he had left?

P.—Subtract.

T.—Subtract what?

P.—Sixteen from thirty-six.

T.—But what are your sixteen and thirty-six?

P.—Bananas.

T.—Then how will you state your subtraction?

P.—Thirty-six bananas less sixteen bananas.

T.—And what does that leave?

P.—Twenty.

T.—Twenty what?

P.—Twenty bananas.

I will not give any more of this supposed recitation. The example that I have given is already too familiar.

V. There are two distinct phases in the number work in this grade. One is the side in which the child must slowly and carefully feel his way through the conditions of the problem to see what processes must be employed to reach the desired result, and be able to employ these processes in such a way as to solve the problem. The other phase consists of rapid mental work involving the common combinations of small numbers, the results of which the child must memorize and be able to give almost as quickly as called for. These two phases are very much in evidence in the work this particular class is doing. To show the degree of complexity of some of the little problems, let me give the one that the 3A's had for the recitation before I was asked to take the room. It was this: Two men start from the same point and walk in opposite directions. One walks at the rate of 5 miles an hour, and the other at the rate of 7 miles an hour; how far apart will they be at the end of 12 hours.

VI. The children seemed to appreciate their own ability, and when any work was suggested they replied very readily whether or not they thought they could do it. In most cases they were quite sure that the work suggested was entirely within their grasp. The children's remarks in reference to the music which I had placed upon the board, and in connection with the fact that the

few remaining in the room at recess readily sang the exercise without any help or suggestion, showed that they knew in looking at that kind of work whether or not they could do it.

Again, in connection with the 3A's reading lesson, which was upon George Washington, the first lesson in the second part of the Third Reader, I asked them what they had done in the preceding lesson. They told me they had worked out the difficult words the day before. Any one who knows the lesson knows it is one of the most difficult lessons in the Third Reader. I jokingly remarked to the class, "Are you sure you know all these hard words to-day?" One little girl answered, "Oh, yes, ma'am; after we have worked out hard words once we never have any more trouble with them." They seem to appreciate their ability in their different lines.

VII. Doubtless we are coming to appreciate more and more that school is not a preparation for life, but that school is life. Instead of expecting pleasure to come to the child as a result of work done in school, we should try to make sure that the child gets the pleasure as he goes along through his school work. There is no reason why in a well-conducted school there should not be the most perfect confidence between teacher and pupils; the most genuine delight in each one working for the best interests of the entire community of which he is a part. In addition to this, if the school does its duty by the child it must make him feel a certain responsibility in seeing everything connected with the work of the schools passed off in the best way possible. This is the sentiment which I found in this room. Each child seemed to feel personally responsible for the manner in which the work of the day was done, and I count this one of the things which the teacher ought to bring into the school.

VIII. This teacher never taught a day of school before the beginning of the present year, but never was a suggestion made either in grade meeting or to her personally which could not be seen in a few days in the actual work in her room. She is always open and ready for all possible criticisms and suggestions that could be made. After a certain grade meeting I overheard the remark that she was very anxious indeed to see if the points that had been discussed in the grade meeting were not exactly the ones to help her in particular places where she was weak, and she was very anxious for the next day's work to begin, to see if she could remedy the defects.

DEPARTMENT OF PEDAGOGY.

Conducted by **ARNOLD TOMPKINS**, Chair of Pedagogy, University of Illinois, at Champaign.]

THE COLLEGE GRADUATE AS TEACHER IN THE PUBLIC SCHOOL.

It is a current question whether the college graduate or the normal school graduate succeeds best in school work. The difference between them arises in the larger scholarship of the one as set over against the professional training of the other. Each has his respective advantage, and, also, his respective shortcoming. The logical conclusion is that every teacher must have the liberal scholarship of the one and the professional training of the other—should be a graduate of both schools. One of the most pleasing and hopeful signs in the educational growth of Indiana is the large number who take both the normal and university course.

But it is not my purpose to speak of this matter in general, but to call attention to the conspicuous defect of the college graduate for public school work. This defect is that of failing to take account of the psychological, or chronological factor in education. He has been absorbed in the logic of the subject for its own sake, and when he comes to teach it, the only factor in the process which he is accustomed to consider is the subject itself. He teaches as he was taught. If he began his work in Zoology with the microscope and protoplasm, it must begin thus to whatever grade of pupils it is taught; notwithstanding that the child naturally and necessarily begins with the external facts of color and form and parts, in action and habits of the animal. A scientist of the state once insisted that for the child to study the color, forms and external structure of leaves, as was being done in the schools, was worse than a waste of time. He held that a child should begin with the inner, the vital principle of the leaf, by microscopic study, and thus construct logically the botany of the leaf. Yet, up to the time of entering school, mother nature had taken an opposite course with the child. An eminent teacher of botany in a university, who is a graduate of a normal school, said recently that his students do not teach botany well in the public school, because they take the order which he pursued with them to be the proper order to pursue with pupils in the grades and in the high school. This university professor differs from the one referred to above.

in having considered the child's order of learning in addition to the subject matter to be learned.

Everywhere the logical order of the subject has been forced upon pupils : so that just now, there is a general and heroic effort to readjust the course of study to the natural order of the child in learning. We are no longer satisfied to follow, in the course of instruction, the logical order of addition, subtraction, multiplication and division ; or that of arithmetic, algebra, geometry and trigonometry. While grammar logically precedes composition, the school course reverses the order. History must not be deferred till geography is completed. The recent fruitful agitation of the question of the course of study—enriching it, correlating it and concentrating it—is only an effort to readjust the logical arrangement of subject matter to the psychological order of the growing pupil.

The college graduate is apt to make a mistake in management similar to that which he makes in instruction. He tries to manage children as he would young men and women. He assigns lessons to the child and the adult in the same way, and assumes that children will prepare a lesson by being told to do so. Little precaution, therefore, is taken to secure the full effort of the pupil during the study period. Since college students prepare their lessons at home, the same custom is carried far into the public school. Recently a college graduate was superintendent of the schools of a city, and he required the pupils of the high school to meet only for the recitations, and that in the forenoon. This superintendent was succeeded by a normal school graduate, who immediately changed the old plan and required the pupils to attend the full day, and to prepare lessons under the direction of the teacher. No matter which of these was right ; their difference illustrates the point under discussion. One who manages a school successfully must consider the development of the pupil. There is a time when the pupil should have the most minute and direct attention from the teacher during the preparation of the lesson ; and there comes a time when such attention would not only be useless, but harmful—a time when the pupil should be left wholly free to choose his own time, place and manner of preparing his lesson.

The college man makes in many ways a college out of a high school. He preaches, or has it done, a baccalaureate at commencement. He calls his classes Freshman, Sophomore, Junior

Senior. They must organize and have class presidents, and above all, class colors and class school yells. They have foot-ball teams and oratorical contests. Are they not soon to don the cap and gown at graduation? I do not mean to say that these things are bad, but to point out a natural tendency of the college-man in managing a public school. In fact, most of these things seem more proper for a high school than for a college, since men sometimes put away childish things.

Of course the normal school graduate tends to make parallel mistakes along the opposite side of the foregoing; but I am not considering those now. They lie in the direction of over-consciousness of method in instruction, over-regulation in management.

CHRONOLOGICAL AND LOGICAL METHOD.

There are a few master ideas which lie at the basis of every teacher's preparation. One of them is the distinction between the psychological or chronological and logical methods of a subject. We wrestled with it frequently in the normal school. Sometimes we thought we had it down, but it would rise again, and frequently challenged us during the entire course.

It is customary to identify these two methods with the methods of the immature and the mature mind; the psychological order being that of the child's mind in learning and the logical being that of the developed mind; that is, the first thinks psychologically, and the second, logically. The fact is that both think psychologically-chronologically; of course they do, for how else could they think. And both think subject matter which has a logical constitution.

Hence the basis for the distinction is not in the degree of maturity of the thinker. It rests in the distinction between subject and object, between idea and the formation of the idea and the formation of the thing.

For instance: there has been from the beginning a force creating and shaping our government, and making it what we now find it. The government has had its necessary or logical order of growth. The stages are fixed in a series of conditioning and conditioned: they have a logical order.

The individual forms the idea of that government: but this is

not the same process by which the government itself was formed. My idea of the government had to grow; but that was not the growth of the government of which I formed the idea.

The logical order is the order of the thing which the pupil thinks; the psychological order is the pupils' order of thinking the thing. The earth has its own order of existence, and the pupil's idea of the earth has its order of existence. Everything man thinks has come to be what it is through a course of development under determining forces; it has its own inherent order and connection of attributes and parts. Man's ideas also are the result of a development, fixed by the mature mind. The logical order is the order of *being*; the psychological order, the order of *knowing*.

EDITORIAL.

"EVERY follower of God and friend of humankind will find the only sure means of carrying forward the particular reform to which he is devoted in universal education. In whatever department of philanthropy he may be engaged, he will find that department to be only a segment of the great circle of beneficence of which universal education is the center and circumference."—*Horace Mann*.

"THE frame of mind in which a teacher daily enters his school room is of inexpressible importance. All his personal interests, his business connections, his schemes of aggrandizement or of pleasure should be left behind him. The devotion and concentration of all his faculties are the property of his school. * * * A teacher more than any other man should reserve all his energies for his great work."—*Horace Mann*.

ANNIVERSARY NUMBER.

There come times in the lives of individuals when it is well to stop, look around and take one's bearings. Such a halt, though brief, is good absolutely and good relatively. It is good absolutely since if one has not made the best use of his talents and opportunities he may institute a court of inquiry and answer the question sometimes propounded in examination, "If not, why not?" Such a halt is good relatively that one may see whether he is ahead or behind those with whom he started in the race. Such a time has come to us. This *August issue* completes the twenty-fifth year that this Journal and its present editor have held their present intimate relations. It is in fact a silver anniversary number. Looking back over the quarter of a century that intervenes between the present and our first issue, we believe we have made progress.

Not long since a teacher of experience, a lady, said to me, "If there is

one thing in the world of which I am proud, it is that I have worked in and for the common schools." There is much sentimental nonsense among our youthful college and convention orators about the common schools being the hope of the country, etc., but there is great truth also, more than the speakers realize themselves. As one of our esteemed contemporaries says: "He is but a careless reader of history who does not see that upon this continent is to develop the greatest nation that has yet existed upon the earth and it seems equally evident to us that the common school is the stone rejected or at least disregarded by the original builders which is to become the chief stone of the corner of the highest civilization that is to be."

Like our friend mentioned above we, too, are proud that our work has been with and for the common schools and the teachers of common schools. Looking back to our first issue we find that in the declaration of principles in that first editorial we expressed a determination to have discussed in the pages of the JOURNAL the great educational problems of the day and to advocate warmly any measure that will tend to advance the cause of popular education and general intelligence. How faithfully we have labored in these paths the pages of the JOURNAL will show. The reforms that have been made in our common school system have ever found a warm advocate in the INDIANA SCHOOL JOURNAL. We have endeavored to discuss impartially the merits and defects of common school education, thus aiding teachers to think and see for themselves. We have endeavored ever to be *loyal* to the common schools.

As we enter upon the twenty-sixth year as editor, our loyalty shall in no sense diminish. Our past shall be a pledge for our future. We will ever strive to keep in advance in the line along which the common schools must progress.

We thank our friends all over the state who have sent us words of encouragement and cheer. How much hopeful words and kind wishes smooth the rough path of every-day business life the thoughtful teacher can calculate from his own experience. In return—

"If any little word of mine may make a life the brighter,
If any little song of mine may make a heart the lighter,
God help me speak the little word and make my bit of singing,
And drop it in some lonely vale to set the echoes ringing."

HARRIET BEECHER STOWE.

Since the last issue of the JOURNAL Mrs. Harriet Beecher Stowe, the author of that wonderful book, "Uncle Tom's Cabin," has heard and answered the call to come up higher. Born in 1812, her life stretched through the greater part of the nineteenth century. She witnessed many changes in the customs and laws of her country, but no change that came within her long experience of eighty-four years was more radical than that to which she herself contributed.

"Uncle Tom's Cabin" was written in 1851. 300,000 copies were sold during the first year, and between 5,000,000 and 6,000,000 since it was first given to the public. Within two years it had been translated into so many different

languages that Oliver Wendell Holmes in some verses written for Mrs. Stowe's seventieth birthday said that if all the nationalities who knew of the book were summoned to a party

"Briton and Frenchman, Swede and Dane,
Turk, Spaniard, Tartar of Ukraine,
Hidalgo, Cossack, Cadi,
High Dutchman and low Dutchman, too,
The Russian serf, the Polish Jew,
Arab, Armenian and Manchoo
Would shout: 'We know the lady.'"

A little more than ten years after the book was published, the monstrous evils so vividly portrayed by Mrs. Stowe were made impossible of repetition through the Emancipation Proclamation.

In the August *Atlantic* appears an article by Mrs. J. T. Fields containing some delightful reminiscences of Harriet Beecher Stowe. Mrs. Stowe and Mrs. Fields were warm friends and in this article we get a friend's view of this wonderful woman.

Mrs. Fields writes that late in life Mrs. Stowe was accosted by an old retired sea-captain. "When I was younger," he said, respectfully, "I read with a great deal of satisfaction and instruction Uncle Tom's Cabin. The story impressed me very much and I am happy to shake hands with you, Mrs. Stowe, who wrote it." "I did not write it," answered the white-haired old lady gently. "You didn't?" he ejaculated in amazement. "Why, who did, then?" "God wrote it," she replied simply, "I merely did his dictation." "Amen," said the captain, reverently, as he thoughtfully walked away.

While in Rome Mrs. Stowe was visiting the room of the Castellani brothers, famous workers in gold. Mrs. Stowe was full of enthusiasm and lingered long over the things the brothers brought forward to show. Among them was the head of an Egyptian slave carved in black onyx. While she was enjoying it, one of the brothers said to Mrs. Stowe, "Madam, we know what you have been to the poor slave. We are ourselves but poor slaves still in Italy,—you feel for us—will you keep this gem as a slight recognition of what you have done?" She took the jewel in silence, but her eyes were filled with tears, and it was impossible for her to speak.

Although Mrs. Stowe was destined never again to write so remarkable a book, she has given to the world several works of great literary excellence. "The Minister's Wooing" originally published in the *Atlantic Magazine* causing great comment at the time it appeared, is perhaps one of her best.

Mrs. Stowe's death was not sudden. Her clouded mind that was such a source of lament to her friends was but the gradual departure of a brave spirit from this earth, and a gradual entrance upon the life beyond. This world has known but little of her since 1885.

NATIONAL EDUCATIONAL ASSOCIATION.

The N. E. A. held at Buffalo, July 7-10, was one of the greatest educational meetings on record. More than 8,000 persons paid the annual fee, which makes it, next to the Denver meeting, the largest in the history of the association. There were not nearly so many "excursionists" as at Denver,

and it was claimed that the Buffalo meeting excelled all others in the number of representative educators present. It was uniformly conceded that the association had never before been so well provided for. The arrangements were practically perfect.

H. P. Emerson, superintendent of the Buffalo schools, and Albert E. Swift, secretary of the local committee, deserve special credit. The Buffalo teachers, as a body, devoted themselves to the pleasure and welfare of the visiting teachers. Let it be specially noted that *eight hundred* of the Buffalo teachers joined the association and paid the fee.

The program was unusually strong and almost every person appointed to duty was present. It was noted that the department meetings were larger and better than ever before. The weather was as near perfect as it often gets, and everybody praised Buffalo.

The Indiana headquarters were at the Hotel Ontario, which is centrally located and admirably kept. It is one of the best \$2.00 a day hotels in the country.

Pres. N. C. Dougherty deserves much credit for the success of the association. To him belongs the credit of the superior program and also the carrying out of the program—something that requires executive ability and parliamentary skill. He was especially happy in his introductions. His uniform courtesy made everybody his friend. The only thing he lacked was voice enough to fill the large hall in which the meetings were held.

Chas. R. Skinner, state superintendent of N. Y., was elected president of the association for next year. Irwin Shepard, of Winona, Minn., was re-elected secretary and J. C. McNeil, of West Superior, was re-elected treasurer. Miss Mary E. Nicholson, principal of the Indianapolis training school, was elected director for Indiana. Pres. Joseph Swain, of Indiana University, was elected president of the college section.

The next place of meeting will probably be Minneapolis. Milwaukee had almost as many votes and Detroit was the third choice. The whole matter was referred to the executive committee with power to act.

Indiana was represented by about one hundred twenty-five teachers. Ninety of them registered at headquarters in a book provided for the purpose. There are several other states that always beat Indiana in point of attendance, and yet it ranks far above the average. The number in Indiana who feel it a privilege as well as a duty to attend these meetings is yearly increasing.

INDIANA YOUNG PEOPLE'S READING CIRCLE.

LIST OF BOOKS FOR 1896-7

For pupils of second grade:—Twilight Stories, 30 ¢s.; Classic Stories for Children' 25 ¢s.

For pupils of third grade:—Nature Myths, 28 ¢s.; Robinson Crusoe, 28 ¢s.; Stories of Colonial Children, 35 ¢s.

For pupils of fourth grade:—Whittier's Child Life and Lamb's Tales, 50 ¢s.; The Boy with an Idea, 90 ¢s.; Decatur and Somers, 75 ¢s.; Stories of Old Germany, 35 ¢s.; Little Smoke, 90 ¢s.

For pupils of fifth grade:—A Story of LaFayette, 90 ¢s.; The Story of Our Continent, 60 ¢s.; World and Its People, VII, 60 ¢s.; Sam Hardwicke, 75 ¢s.; Children's Stories in American Literature, 50 ¢s.

For pupils of advanced grades:—Butterfly Hunters, 75 ¢s.; The Story of Liberty, \$1.00; Feats on the Fiords, 70 ¢s.; Silas Marner and Lamb's Old China, 50 ¢s.; A War with Pontiac, 70 ¢s. Total, \$11.86.

Books sent prepaid. Cash or its equivalent should accompany the order.

Do not send personal check. Send draft, money order, cash in registered letter, or township warrant for full amount of the order. The purchaser must pay cost of remittance.

Please state the express office to which we shall send your books. If you do not receive your order promptly, write at once to George F. Bass, manager, Indianapolis, Ind.

ANSWERING THE STATE BOARD QUESTIONS.

The JOURNAL congratulates itself that its answers to the State Board questions are so uniformly satisfactory. The question comes occasionally, "Why do you not give the answers the month following the one in which the questions are used, instead of waiting a month?"

The answer is that the questions are used on the last Saturday and this sometimes means the last day of the month and they cannot be had until they have been used. This means that they must be answered, put into type, run through the press, bound and mailed *after* the last Saturday of the month. And this means a delay in mailing of from a week to ten days; and it further means that the answers would have to be made hastily, which would give room for many inaccuracies.

Teachers, as a rule, use the answers as a means of review and as a preparation for examination, and it makes no difference to them *when* they are published. Of course a teacher, after he has answered a set of questions, is anxious to see the printed answers to the same questions and make comparisons, but this only happens to each teacher *once* in one, two or three years.

The conclusion is that teachers would prefer to have the JOURNAL come to them a week or ten days earlier each month, and to have the answers more accurate, rather than gratify a curiosity a little earlier once a year, or once in two or three years.

TEACHERS' READING CIRCLE.

The Teachers' Reading Circle continues to grow from year to year. The number of teachers required to fill the schools of the state is about 13,500 and the number of teachers who joined the Teachers' Reading Circle for the year 1895-6 was a few more than 13,000. No other state in the union approximates this record. Not only does the number of members increase but the relative number of those who take the examinations increases more rapidly. Last year those taking the examination was the largest up to that date, but the number this year will double that of last year. For example,

Dubois county sends in 140 sets of manuscripts; Franklin county, 71 sets; Fayette, 49 sets, etc., and this is Fayette's first year.

By the recent action of the State Board, these examinations have grown into great importance. Teachers who pass the examination successfully on the literary book are excused ever after from a literary examination and those who pass on the professional book are excused from the examination on the science of teaching. Those who pass these examinations for four years and get a diploma are given credit on state certificates without examination.

EXAMINATION OF HIGH SCHOOL TEACHERS.

Because the law does not explicitly state that a teacher of higher branches shall be examined upon those branches, the practice has been, until quite recently, to permit persons to teach in the high school on the common school license. By degrees the custom grew of requiring high school certificates. State Superintendent Vories ruled that the law was satisfied when the teacher held a license for the special branches he was required to teach.

State Superintendent Geeting has recently ruled that the spirit of the law is that a teacher *must* hold a license for the subject or subjects he is required to teach. The state board approves this decision on the ground that it is in accordance with the intention of the law, and on the ground that it is in the interest of good teaching and a protection to the competent teacher.

COUNTY INSTITUTES.

The following itinerary of State Superintendent Geeting will be of general interest. He will attend institutes in the counties named as follows:

August 3-7—Monday, LaPorte; Tuesday, Parke; Wednesday, Pike; Thursday, Dubois; Friday, Perry.

August 10-14—Monday, Warrick; Tuesday, Franklin; Wednesday, Owen; Thursday, Hendricks; Friday, Kosciusko.

August 17-21—Monday, Dearborn; Tuesday, Orange; Wednesday, Monroe; Thursday, Cass; Friday, Randolph and Adams.

August 24-28—Monday, La Grange and Noble; Tuesday, Huntington; Wednesday, Ripley; Thursday, Sullivan; Friday, Greene.

August 31-September 4—Monday, Wabash; Tuesday, Lake; Wednesday, Warren; Thursday, Boone; Friday, Fayette.

September 7-11—Monday, Madison; Tuesday, Tippecanoe; Wednesday, Fountain; Thursday, Carroll; Friday, Grant.

September 14-18—Monday and Tuesday, Starke.

THE JOURNAL FOR 1896-7.

The JOURNAL appears this month in a new dress—the type used, is new from beginning to end.

Other things being equal, the JOURNAL has a claim on every Indiana teacher. It has done more for the teachers of this state than all other papers combined, and its only mission is to contribute to their highest good.

Its ambition is to be equal to the best. It does not strive to be the most metaphysical or the most philosophical; neither does it strive to represent any one school of thought; but it does strive to represent the best in all schools of thought, and to give this best in such a way as to make it helpful to the average teacher in the every-day duties of the school room.

In order to insure to its readers the best and most advanced thoughts, it employs a larger corps of department editors than does any other monthly educational paper. No persons in the state stand higher than these editors in their special departments.

Who outranks Arnold Tompkins, the author of several high-grade books on pedagogy, one of which is to be used the coming year in the Reading Circle course?

Who outranks Sarah E. Tarney-Campbell, who revised the Indiana readers, and who has no superior in the state as an institute instructor?

Who excels Mrs. Olcott as a practical primary teacher, and who can make for the average teacher more helpful suggestions?

Who outranks Chas. A. McMurry, the author of "General Method," who has agreed to contribute to every issue of the coming year?

His articles will be on "*Herbart's Ideas Applied to Teaching the Common School Branches.*" These will be practical articles, made as plain as possible for the use of the average teacher. These articles alone, will be worth more than the price of the journal.

Who stands ahead of Jonathan Rigdon, author of books on several different subjects, who is so satisfactorily helping teachers in their study of Shakespeare?

Who can come nearer to giving universal satisfaction in his "answers" or in his "Food for Thought" than W. F. L. Sanders, the author of a grammar and of a history outline, a genius in mathematics and an all-round scholar?

Miss Belle Thomas, of the Cook county normal, so well and so favorably known to Indiana teachers, has agreed to help make the JOURNAL the best paper in the country for Indiana teachers.

In addition to these, the JOURNAL will soon begin a "Child Study Department" with a person in charge of it that will make it practical and bring it within the reach of the rank and file of teachers.

The JOURNAL asks teachers to examine its list of occasional and miscellaneous contributors for the past year, and then decide whether or not the men and women represented do not rank with the foremost educators of the country. The past shall be a guarantee for the future. Several persons of special ability have already been engaged to contribute one or more articles.

With such a corps of contributors, the JOURNAL feels confident of the continued support of Indiana teachers.

Rhode Island and Delaware, because of their small size in comparison with the other states, have been called Uncle Sam's sleeve-buttons.

QUESTIONS AND ANSWERS.

STATE BOARD QUESTIONS USED IN JUNE.

PHYSIOLOGY.—1. What is an organ?

2. What is the structure and significance of hair as found over the entire body?

3. Describe the internal structure of the kidneys.

4. Describe the cochlea and indicate the functions of the various parts.

5. What are the special senses?

6. What is a psychic center? Where is it to be found?

7. Describe the membranes of the brain.

8. How does alcohol in large doses affect the nervous system as shown in walking? (Any five.)

GEOGRAPHY.—1. What are the relative advantages of the text book and the topical ways of presenting geography?

2. To what extent would you permit memorizing in the study of geography and why?

3. Locate Edinburg and tell why it is called the Modern Athens.

4. Locate the three principal cities of Indiana, and give the geographical reasons for their respective positions.

5. What importance in the commercial and economic world has the Malay Archipelago had?

6. To what extent do agriculture and manufacturing depend upon each other for their greatest progress and growth?

7. What geographical conditions seem to make the two capitals of Rhode Island proper?

READING.—

“Blithe were it then to wander here !
But now—besheiw yon nimble deer
Like that same hermit's, thin and spare,
The copse must give my evening fare;
Some mossy bank my couch must be,
Some rustling oak my canopy.
But hosts may in these wilds abound,
Such as are better missed than found;
To meet with Highland plunderers here,
Were worse than loss of steed or deer—
I am alone; my bugle strain
May call some straggler of the train;
Or, fall the worst that may betide,
Ere now this falchion has been tried.”

—*Scott's Lady of the Lake.*

1. Who is represented as speaking the above? Where is he and why? Relate briefly his subsequent experiences.

2. Where is the scene of the poem laid?

3. What do you regard as the secret of the popularity of this poem?

4. Does Scott's literary work indicate a strong desire on his part to merit distinction as a poet? Mention the titles of a few of his best known productions.

5. In what particulars is his life worthy of emulation?

6. Discuss the 8th year reading work in the State course of study.

ALCOHOL AND NARCOTICS.—1. How does the constant use of alcohol, in the small quantities present in the light sour wines, produce hob-nail, or gin drinkers' liver?

2 Criminal statisticians attribute a very large per cent. of crime to the use of alcohol. May not the love of drink and the tendency to crime largely depend upon some antecedent abnormal condition of the system? Give reasons for your views.

3 Why should the external use of alcohol on the skin contract the small blood vessels, and its internal use enlarge them?

4 The action of the saliva upon the starch of foods is absolutely essential to healthy digestion; how does the use of tobacco interfere with this?

5. Why should the use of soothing syrups, children's cordials and like remedies be forbidden in the case of many young children?

THE TEMPEST.—1. Is the Tempest a tragedy, a comedy, or a history? Give reasons for your answer.

2. The first scene of Act I portrays a storm at sea. What unusual power, if any, is shown in this description?

3 In scene two of Act I, Prospero recounts to Miranda the main events of his own life and hers, and explains to her how they came to be in exile on the island. What are some of the excellencies of this narrative?

4. Prospero neglected to do his duty as duke and gave his life to study. Does this fact justify the poet in exiling him? Give reasons.

5 After relating how he turned over the management of his dukedom to Antonio, Prospero says of Antonio:

"He being thus lorded,
Not only with what my revenue yielded,
But what my power might else exact—like one
Who having unto to truth, by telling of it,
Made such a sinner of his memory,
To credit his own lie—he did believe
He was indeed the duke," etc.

What is the antecedent of *it* in line four?

6. What psychological doctrine is expressed in the quotation given in line five?

7 At the close of this narrative Prospero is represented as causing Miranda to fall asleep, saying,

"I know thou canst not choose."

In what capacity does the poet here represent Prospero?

(*Select No. 5, and any other four.*)

ARITHMETIC.—1. A man bought a farm for \$8,000 and agreed to pay principal and interest in four equal annual installments. How much was the annual payment, interest being 6 per cent.

2 If 6 apples and 7 peaches cost 33 cents, and 10 apples and 8 peaches cost 44 cents, what is the price of one of each? Write out complete analysis of process.

3 What will be the difference in the expense of fencing two fields of 25 acres each, one square, and the other in the form of a rectangle, whose length is twice its breadth, the fence costing \$0.62½ a rod?

4. A merchant purchased goods on 6 months and sold them immediately at cost. What per cent. did he make, money being worth 7 per cent.?
5. Write a negotiable promissory note and endorse it.
6. Bill:

INDIANAPOLIS, IND., Jan. 9, 1896.

W. B. Burford,

Bought of L. S. Ayers & Co.,

100 yds. Brussels carpet at	-	-	-	-	-	-	\$1 50
25 yds. Mohair carpet at	-	-	-	-	-	-	3 40
75 yds. Matting at	-	-	-	-	-	-	25
1 doz. Rugs at	-	-	-	-	-	-	13 40

Paid by draft on N. Y. and receipted by clerk.

Write the draft and properly receipt the bill, as clerk.

7. Illustrate, as to a fourth year pupil, how fractions may be added.
8. Give a principle in multiplication and illustrate it fully by examples.
9. A man wishes to make a bin to contain 125 bushels, of equal width and depth, and length double the width. What must be its dimensions? (*One decimal place will be sufficiently accurate.*) (*Any eight.*)

HISTORY.—Outline a course in history for the eight years below the high school, giving reasons for the work placed in the first six years.

SCIENCE OF EDUCATION.—1. Goethe says; "Childhood must always begin at the first and pass through the epochs of the world's nature."

What may be said in support of this theory of education?

2. How would the theory of culture epochs affect the selection of historical, biographical and literary subject matter for children of a given age?
3. For what grades are the culture epochs which American history exemplifies best suited?
4. How can the work in history and that in geography be closely connected in the pupil's mind?
5. In the grades, how can nature study be unified with history and geography?
6. How can the instruction in drawing and music be closely related to the other subjects of instruction?
7. In what ways may arithmetic be closely connected with the study of nature and other subjects?
8. Express a general opinion as to how far it is possible to bind into one whole of knowledge all the work done in the eight grades.

(*Select No. 8, and any other five.*)

GRAMMAR.—"His memory is first and most sacred in our love; and ever hereafter, till the last drop of blood shall freeze in the last American heart, his name shall be a spell of power and might."

1. Classify the above sentence as to use and form.
2. Select all the clauses and state the class to which each clause belongs.
3. Select the different words used as connectives and state what each word connects.
4. Select the entire predicate of each clause.
5. State the use of each adjective in the sentence.
6. Write a composition of 200 words on "The teaching of language in the first three grades."

ANSWERS TO PRECEDING QUESTIONS.

PHYSIOLOGY.—1. An organ is a part of the body having a special function to perform (See page 28, text-book.)

2. A hair consists of a root, the imbedded part, and a shaft, the visible part. Hairs emerge from small follicles imbedded in the true skin. In constitution a hair consists of three distinct portions, an epidermis or outer portion, a fibrous, and a medullary portion.

The significance of the presence of hair as found over the entire body is that the race, at one time, used little if any clothing, and nature provided a hairy one as a protection. As civilization advanced and man provided a covering for his body, the hairy one became useless and unnecessary, and its development became only rudimentary. (See page 201.)

3. If a longitudinal section of the organ is made the solid substance is found to consist of an outer cortical portion and a deep-seated medullary portion. The conical masses of the medullary portion, from fifteen to twenty in number, form the pyramids. The apexes of the pyramids projecting into the renal pelvis (the funnel-shaped dilatation of the kidney) are called papillae. The substance of the kidney is made up of minute, closely packed tubes, with blood vessels, lymphatics and nerves, held together by a soft material. It has been estimated that there are two million tubuli in each kidney. (See page 204.)

4. (See page 283.) The cochlea is a kind of spiral harmonican, vibrating in different parts of its extent in unison with sounds of different pitch. The fibers of corti and the scala media enable us to distinguish, discriminate and appreciate musical sounds. By some "the *scala media* is called the true organ of hearing." The liquid in the *scala tympani* and *scala vestibuli* is put in vibration by the stapes, and this liquid in turn transmits its vibrations to the basilar membrane. The auditory cells resting upon this membrane report through their nerve fibres its every vibration.

5. Seeing, hearing, smelling, feeling and tasting. There is a form of feeling in deep tissues, which has commanded some attention, namely, *muscular sense*; and the *sense of temperature* has some claim to be considered as distinct from all others.

6. A psychic center is one connected with the mental operations, as those of the will, of the sensibilities and of the intellect. (See page 246, 247.) The psychic centers are in the cerebrum.

7. The outer one is called the *dura-mater*; it serves as a kind of periosteum. It is hard and tough. Its inner surface is in contact with a thin, web-like membrane called the *arachnoid*. The inner membrane is called the *pia mater*; it is very vascular; it dips into all the depressions of the brain (and cord), the nourishment of which it assists. (See pages 221 and 222.)

8. It brings about an aberration in muscular precision and action, brought about by the effects the alcohol had upon the nervous system, and also from its direct action upon the muscular fiber itself.

GEOGRAPHY.—1. The answer to this question is determined somewhat by the nature and management of the different aids which may accompany each "way." Aside from these aids the topic "way" affords the advantages

(a) of using more than one text-book, and this always increases the interest and leads to the attainment of broader ideas; (b) of putting into the recitation the conditions that do not permit the use of the text-book; (c) of giving the teacher a chance to utilize his personality and that of his pupils; (d) of giving a chance to explore other fields than text-books for geographical knowledge, not being hampered by any limitations.

The text-book "way" (a) requires less work on the part of the teacher and pupil; (b) is apt to result in the accomplishment of a definite aim; (c) affords a good chance to prepare a lesson in a prescribed time.

2. When the thought is clear and the language terse and exact, it is sometimes beneficial to get the exact wording of a definition or a principle. Other than this, there should be no memorizing of the exact words. The recalling of ideas through the law of association is the kind of remembering that is needed.

3. It is called the Modern Athens because of the great number of educational institutions located there, and because of the high degree of culture many of its people have attained. Its educational facilities are unsurpassed in Europe.

4. *Indianapolis* is located in the center of the state, and is also in the center of a very fertile region. Its location in the pathway of the westward march of travel has also been highly conducive to its growth.

Evansville is surrounded by rich land both in Indiana and Kentucky. It is the chief trade mart of the Green-river region of Kentucky, and a central point for the shipping of the products of southeastern Indiana.

Ft. Wayne is at the junction of the two streams forming the Maumee, and is also in the direct line of travel from Pittsburg to Chicago.

5. A great commerce is carried on by the Malaysians, in exchanging the products of their different islands and of their industry. Their products are such as are in great demand in most parts of the world, and this fact has given them an extensive foreign trade, and has caused many foreigners to take up their abode with them. To civilization, the Malaysians have not contributed anything. The healthful influence of the foreign element has been largely counteracted by the great number of pirates and corsairs that have infested the islands. Throughout the archipelago is found every grade of government from isolated families living without laws or magistrates to the extreme of despotism. The special value of the productions of this country is scarcely compatible with their state of civilization. Insult is quickly avenged, the plunder of a stranger is not looked upon as a crime, the law is tardy and irregular, and the native elements are very incredulous and superstitious.

6. The manufacturer of cotton, woolen and flax goods, etc., depends upon the farmer for his raw material, and the farmer depends upon the manufacturer for his clothing, house furnishings, labor outfits, etc.

7. Each claims to be the political center of the state.

ALCOHOL AND NARCOTICS.—1. It produces a thickening of the connecting membrane, causing the organ to contract; this contraction produces rounded projections on its surface, giving it the name of the hob-nailed liver.

2. It might, but only in exceptional cases, for the supposed "antecedent abnormal condition is indeed *abnormal*, and is not a condition of nine-tenths of the human race; moreover, statisticians make up their tabulated statements from reliable records. The supposed "antecedent abnormal condition" can frequently be traced to the sin of drunkenness of some unfortunate or misguided ancestor.

3. The blood vessels being excited by the stimulus (irritation) of alcohol, there is an increased flow of blood to the part, and this action being repeated daily the vessels become habitually increased in size and distended with blood. When applied to the surface and allowed to evaporate, it causes coldness, which causes the small blood vessels to contract.

4. By the use of tobacco the nerves of the mucous lining of the mouth are partially deadened or paralyzed, and the flow of saliva at meal time is not normal; at other times, when the person is using tobacco, the presence of it in the mouth causes the saliva to flow during all the time of its use; this unnatural draft upon the energy of the salivary glands weakens them, and during the meal they furnish an amount insufficient for thorough work in the process of digestion.

5. Because they contain some narcotic substance that soon sets up its reign in the "living temple." Here, it not only demands that more of its own kind be brought within, but it also creates an unnatural thirst for stimulants.

ARITHMETIC.—1. In this problem—

(a) Each payment is to be the same.

(b) Each payment consists of interest and principal—all the interest then due, and a portion of the principal.

(c) The less a payment consists of interest, the more it consists of principal.

(d) As the principal continually decreases, the part of a payment that is principal is greater at each successive payment than at the preceding one.

(e) The interest paid each time is the interest on the part of the principal still unpaid.

(f) The interest paid the second payment is less than the interest paid the first payment by the interest (for one year) on the part of the principal paid the first payment.

(g) Hence the part of the principal that is paid the second payment is greater than the part of the principal paid in the first payment *by the same*; that is, the part of the principal that is paid in the second payment is the same number of dollars, as would be found by calculating the amount (for one year) of the part of the principal paid the first payment. Similarly, we may show that the part of the principal that is paid in the third payment is the same number of dollars, as would be found by calculating the amount (for one year) of the part of the principal paid the second payment; and so on.

Therefore let the part of the first payment that is principal be represented by 1; then 1.06 represents the part of the second payment that is principal, and 1.1236 represents the part of the third payment that is principal, and 1.191016 represents the part of the fourth payment that is principal.

Adding these proportional parts we have 4.374616; and, $4.374616 \times 6000 = 1371.54+$, = part of the first payment that is principal; adding the interest due, \$360, we have \$1731.54+, the payment that must be made each time. Using the other proportional parts, and adding their respective interests will produce the same results.

(Another solution to this problem will be given next month.)

2. If 6 apples and 7 peaches cost 33 cents, then 30 apples and 35 peaches cost 165 cents; and if 10 apples and 8 peaches cost 44 cents, then 30 apples and 24 peaches cost 132 cents.

From the foregoing we see that a difference of 11 peaches makes a difference of 33 cents in the cost; hence, we know that the cost of a peach is 3 cents.

Seven peaches cost 21 cents; so if 6 apples and 7 peaches cost 33 cents, the six apples must have cost what the 21 cents lacks of being 33 cents, or 12 cents; therefore an apple cost 2 cents.

3. 25 acres = 4000 rds.; $\sqrt{4000} = 63.245+$; 4 times this = 252.98, the number of rods around the square. The required rectangle may be considered as made up of two squares, each containing 2000 sq. rds.; the square root of 2000 gives 44.72+, the number of rods in the width of the rectangle; $2 \times 44.72 = 89.44$, the number of rods in the length of the rectangle; hence, its perimeter is 268.32 rods, or 15.34 rods more than the perimeter of the square. At $\$5/8$ per rod, difference in cost is \$9.58+.

4. \$100 due in 6 months, money being worth 7%, is worth now \$96.618+; $(100 + 1.035 = 96.618)$. $100 - 96.618 = 3.382$; $3.382 \div 96.618 = 0.035$, nearly, or $3\frac{1}{2}\%$.

6. The bill amounts to \$267.15. (See text-book for form of draft.) When settled the clerk will sign the title of the firm, L. S. Ayres & Co., per his own name.

7. Proceed slowly, and let the illustrations be concrete, abundant, and clear. Drawing circles upon the board, calling them *pics*, and marking the divisions properly, proves to be an effective illustration.

8. The multiplier is always an abstract number; as, 5 times 6 apples = 30 apples.

9. 125 bushels @ 2150.4 cu. in. = 268800 cu. in.; by the conditions of the problem, the bin may be regarded as equivalent to two cubes placed side by side, the contents of each being 134400 (cu. in.); the cube root of this = 51.2, the number of inches in the depth and width of the bin; $2 \times 51.2 = 102.4$, the number of inches in the length.

GRAMMAR.—1. According to form, it is a *compound* sentence, having the first number simple and the second number complex; according to use, it is *declarative*.

2. (a) "His memory..... love," is the first clause; it is co-ordinate with the final clause; (b) "till the heart," is the second clause, in order, and is subordinate to the final clause, that follows; (c) "his name might," is the third and final clause; the subordinate clause is adverbial.

3. The first "and" joins "first" and "sacred"; the second "and" joins the two members of the sentence; "till" joins its subordinate clause to "shall be."

4 (a) "Is first and most sacred in our love"; (b) "shall freeze in the last American heart"; (c) "shall be a spell of power and might."

5. (a) "First" and "sacred" are predicate adjectives denoting attributes of the subject "memory"; (b) "last" modifies "drop"; (c) "last" modifies "heart"; (d) "American" modifies "heart."

6. See "Course of Study."

SCIENCE OF EDUCATION.—1. The character manifested in childhood is as unsettled and capricious as was the character of the people of many of the present established governments in their earlier periods, when their civilization was crude and unreliable. The stories which most please the child as soon as he is able to understand are those of tradition and legendary lore, and fairy tales. As he grows older he is more interested in the reliable history of those peoples that have begun to take up the manners and the customs of civilization.

The physical system of the child is the product of the whole past. In its germ state, in the development of the embryo, in the helpless state of the child in its early years, in the strength of its youth, in the dignity of its mature life, the child passes through epochs corresponding to those that mark the world's beginning, development and history.

2 This theory requires that historical, biographical and literary matter be selected so as to correspond to the age of the child. Traditions, legends, stories of the earlier civilization, would be chosen first; next, the best written accounts of the Persians, the Greeks (with the Spartans); following these would be similar selections from the beginning and growth of Rome, and so on.

3 For the fourth and fifth grades; for our country, though building upon a civilized past, has in its earlier history traditions, legends, and much in regard to the life of the Indian; also the manners and customs of the early settlers and the wild condition that surrounded them, give to our first historical epoch attractions similar to that of the beginnings of the old countries.

4 The work in history and that in geography, from their very nature, have their connections, and the true teacher will simply preserve them. The life of a people is necessarily affected by the geographical conditions of their country, and when these are recognized by the teacher the unity of the idea of these studies is assured.

5 In history and geography we frequently deal with science ideas, or else those related or dependent upon science. All ideas that are not beyond the capacity of the pupil should be learned and the especial relation in which they are found should be emphasized. In geography, the study of plants, the nature of soils, the effects of heat, etc., will be especially fitting; in history, the progress of mankind in the arts and inventions will bring into the work many science ideas that are essential to a proper understanding of the subject.

6 In geography, in history and in natural science there is a great necessity for skill in drawing, in representing localities by outline maps; in sketching leaves, plants, animals, etc., and many figures that come within the range of mathematics.

The development and growth of music has its place in the story of the different peoples. In the school room it is valuable in its influence on the feelings. It enhances the efforts and the results in all the other work by putting the mind into a condition that is cheerful and receptive.

7. By counting objects of nature; by calculating the productivity of grain when a single seed produces at a certain rate; by calculating heights, distances and areas. Much of arithmetic is connected with the history of a nation, in regard to its finances, representation, population, suffrage, military department, etc.

8. It is possible through correlation and concentration to bind into a whole all the work done in the eight grades, except those portions that are unrelated to any other portion. If the teacher is capable, this unity is not only possible, it is quite easily done, and is certainly most desirable. It is easily done because interest is rapidly developed, and a great eagerness to know more and to advance is continually manifested by the pupils.

READING.—1. (a) The king of Scotland, disguised and bearing the name, Knight of Snowdown, James Fitz-James. (b) He is on a promontory overlooking Loch Katrine. He has just emerged from a deep glen in search of some comrades of the chase. (c) In a company of 100 huntsmen, attended by 100 dogs, Fitz-James early in the day began chasing a stag in the highlands of Scotland. Having outstripped his comrades in the hunt and being "close on the hounds," he spurred his horse till it fell exhausted. He watched the steed till it expired, and then wandered to Loch Katrine.

2. Perthshire, chiefly Loch Katrine and its neighborhood: afterward Stirling Castle.

3. The poem can hardly be said to have a popularity of its own. The secret of its favor with the public is the secret of the success of all of Scott's poetry. While generally ranked as inferior to Marmion, its characteristic elements are the same. The stately, martial music of the verse, the easily sustained interest of the plot, the fascination of the wild, free life of mountain and glen, the magnificent descriptive passages, and the generous infusion of Scott's own broad, free-hearted, sympathetic human nature, combined to make the poem popular with all but the technical critics.

4. (a) It does. (b) Lady of the Lake, Marmion and the Lay of the Last Minstrel, are the three best known of his longer poems. Scott certainly desired poetic distinction. He speaks of himself as "having boldly courted the favors of Fortune" with his poems.

5. Scott's energy and industry, his love of the beautiful, the natural, the true, the honest and the noble, and his never-failing cheerfulness, are characteristics worthy of emulation. Carlyle says of Scott, "No sounder piece of British manhood was put together in that century."

THE TEMPEST.—1. The Tempest is decidedly a comedy. In both tragedy and comedy there are conflicts. In both, these conflicts must be harmonized. Here lies the difference: The harmony of tragedy is secured by the destruction of one or more of the characters, while that of comedy is brought about by reforming the characters. To the reader there is nothing frightful in The Tempest, although at the very beginning we find ourselves

in the presence of a storm at sea, most terrible to those who are in it. The play is not intended to produce the feeling of tragedy. Ariel assures us

"Not a hair perished;
On their sustaining garments not a blemish,
Fresher than before."

The ruling character, Prospero, is not actuated by the tragic spirit. He had been deeply wronged, but he desires to reform and to save rather than to destroy the authors of his misfortune.

2. This description represents Prospero as having mysterious, superhuman or magic power, by which he can command the winds and the waves and call forth spirits to do his bidding.

3. The following are some of the excellencies of this narrative:

(a) Simplicity.—It is a conversation between an old man and his child.

(b) Its realistic appearance.—Here the poet describes what we know to be an imaginary event so as to make us feel throughout the description that it is a historical narrative.

(c) Its artistic or poetic expression—

"O, I have suffered with those that I saw suffer."

"Be collected:
No more amusement. Tell your piteous heart,
There's no harm done."

"There they hoist us,
To cry to the sea that roared to us; to sigh
To the winds, whose pity sighing back again,
Did us but loving wrong."

(d) Its likeness in portraying human nature. I would have to reproduce the entire scene to exemplify properly.

4. Yes. Prospero deserved to be banished. The loss of his dukedom was occasioned by his own neglect. While we live in this world we cannot altogether neglect worldly ends. The love of books is most commendable. It can nevertheless be so in the extreme as to unfit one for any position requiring executive ability and great activity like the management of an institution. Life here is not thought, not action; but thought translated into action. This is the law of nature:—*whoever neglects a talent, an organ, an opportunity or a kingdom will lose it.*

5. Lie.

6. The psychological principal is, that belief is by no means wholly dependent upon evidence, but is very largely a matter of will. It is possible for one willingly to say over and hold up before his consciousness either what he is in doubt about or what he knows to be false till he comes to believe it is true. Many a lawyer goes into a case uncertain as to the innocence of his client, and comes out of the case fully believing his client innocent though the jury may be unanimous for conviction. The same is true of debaters, and with those who for amusement assume to be skeptical on any important question. It is always dangerous to trifle with one's belief.

7. In the capacity of a magician, or, we may say, a hypnotist.

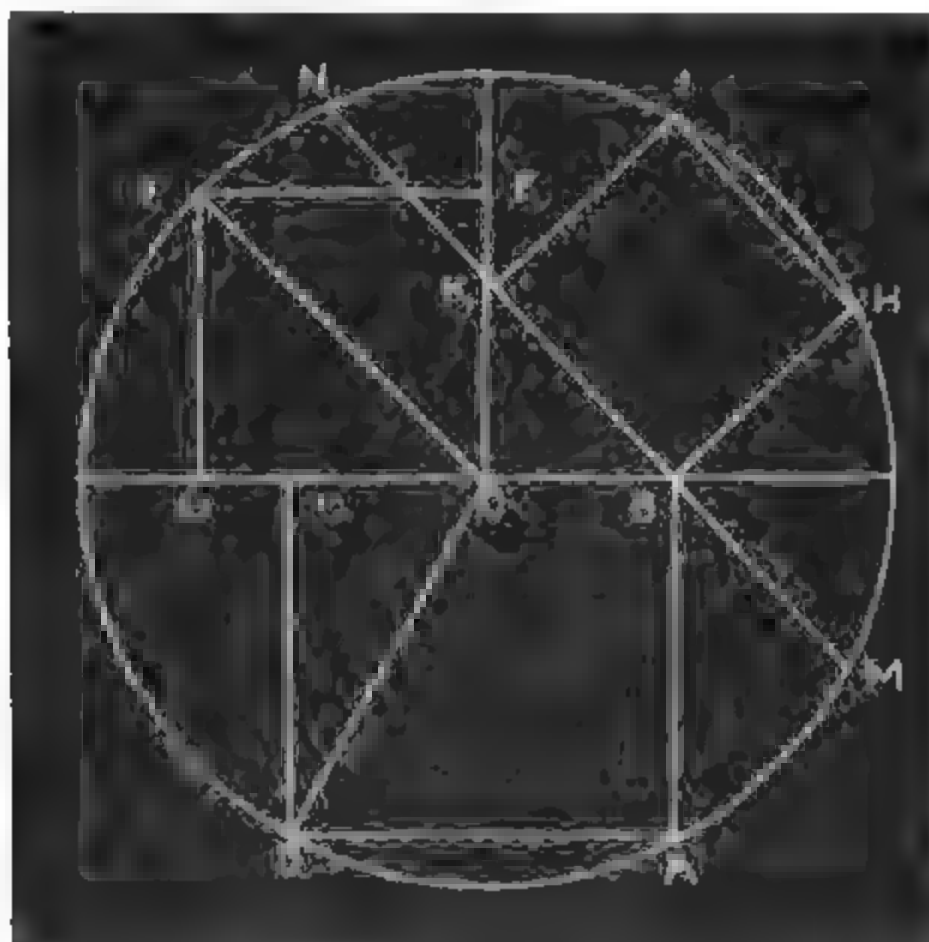
FOOD FOR THOUGHT.

[Send all communications to W. F. L. Sanders, Connersville, Ind. They should be received by August 18. Be prompt. Write only on one side of your paper.]

SOLUTIONS RECEIVED.

PROBLEM 137. Show that the square inscribed in a semicircle is to the square inscribed in a quadrant of the same circle : : 8 : 5.

SOLUTION BY J. C. GREGG.



ABCD=square inscribed in semicircle, and

OEFG=square inscribed in quadrant.

Let $OD=OF=R$; and let $DC=x$; then from the triangle ODC, we have $x^2 + \frac{x^2}{4} = r^2$; from which $x^2 = \frac{4r^2}{5}$ = Area of square AC.

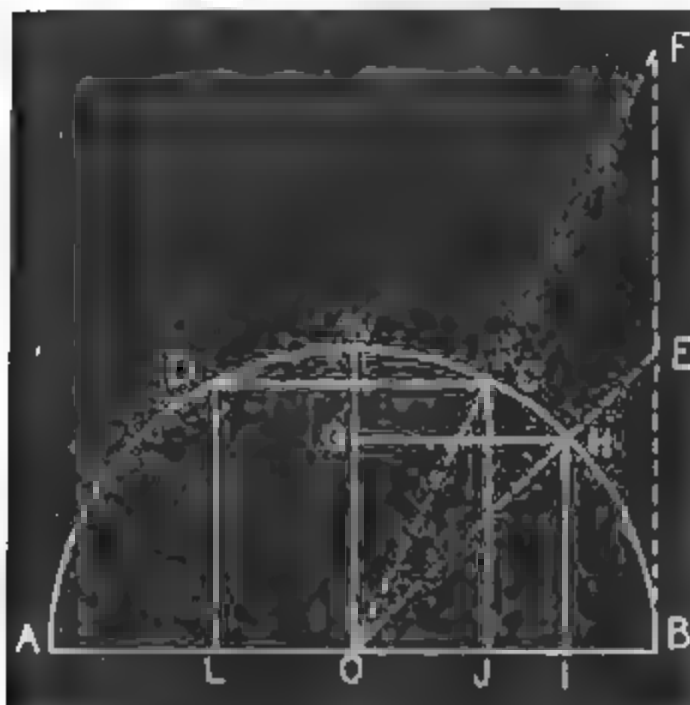
Also let $OE=EF=y$; then $2y^2=r^2$; and $y^2 = \frac{r^2}{2}$ = area of square EG. Now

$$\frac{4r^2}{5} : \frac{r^2}{2} :: 8 : 5, \text{ Q. E. D.}$$

NOTE.—The square BHIK is $\frac{1}{2}$ of ABCD and $\frac{1}{4}$ of square OEFG, and the line MN is trisected at B and K.

[Permit us to call special attention to Prof. Gregg's *note* to his solution. It adds much interest to the solution.—ED.]

SOLUTION: (L. N. FORTS, Supt. Schools, Brownstown.)



sine of 45° ; while the square inscribed in a semicircle is equal to the square of the sine of an angle whose tangent is 2.

Therefore $\sin^2 45 : \sin^2 63^\circ 26' 4'' :: 5 : 8$.

PROBLEM 134. A merchant had a number of eggs, and when he counted them by twos there was one left; counting by threes there were two left, counting by fours there were three left; counting by fives there were four left; counting in this way until he reached fourteen he had thirteen left. How many eggs did he have? (THOMAS JONES, Sulphur Springs, Ind.)

SOLUTION:—If there had been one egg more he could have divided the number exactly by 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and 14; hence, the number of eggs must have been one less than the L. C. M. of these numbers their L. C. M. = 360360; $360360 - 1 = 360359$, answer.

To this problem Supt. J. C. Gregg, Brazil, Ind., sends us a long solution but exceedingly ingenious.

PROBLEM 135 \$7800 of 5 per cent. stock is sold at 104, and the proceeds invested in railway shares paying 6 per cent.; what is the price of the latter if the income derived is increased by \$26?

SOLUTION:— $\$7,800 \times .05 = \390 , first income; $\$390 + \$26 = \$416$, second income; $416 \div .06 = 6,933\frac{1}{3}$, number of dollars stock producing the second income; $\$7,800 \div 1.04 = \$8,112$, received for the first stock; $8,112 \div 6,933\frac{1}{3} = 1.17$; hence, the price per dollar of second stock is \$1.17, or price per share \$117.
(L. E. RADY, Edwardsville, Ind.)

PROBLEM 136. Two clocks strike 9 together on Monday morning; on Tuesday morning, one is 8 min. to 11 when the other strikes 11; how much must the first be moved up so that they may both strike 9 together in the evening?

SOLUTION:—From 9 o'clock, Monday, to 11 o'clock, Tuesday, is 26 hours; in 26 hours there is a loss of 8 min.; in one hour there is a loss of $\frac{1}{3}$ min.; from 11 o'clock A. M. to 9 o'clock P. M. is 10 hours; in 10 hours there would be a loss of 10 times $\frac{1}{3}$ min. = $3\frac{1}{3}$ min., $8 \text{ min.} + 3\frac{1}{3} \text{ min.} = 11\frac{1}{3} \text{ min.}$, the amount the first must be moved up. (W. F. ENTEMAN, Leota.)

PROBLEM 138. Given

$$\begin{cases} x^4 - y^4 = 1280 \\ x^3 y + x y^3 = 480 \end{cases}$$

to determine the values of x and y by quadratics.

SOLUTION:— $(x^2 - y^2)(x^2 + y^2) = 1280$; $x y (x^2 + y^2) = 480$; $x^2 + y^2 = \frac{480}{x y}$;

Substituting this value of $x^2 + y^2$ in the first equation, we have—

$$(x^2 - y^2) \frac{480}{x y} = 1280; \text{ or, } 3x^2 - 8xy - 3y^2 = 0.$$

Transposing, dividing by 3, and completing the square we have—

$$x^2 - \frac{8xy}{3} + \frac{16y^2}{9} = \frac{25y^2}{9}$$

Extracting the square root we get —

$$x - \frac{4y}{3} = \pm \frac{5y}{3}; x = 3y \text{ or } -\frac{y}{3}; \text{ we now find } x = \pm 6 \text{ or } \pm 6\sqrt{-1}, \text{ any } y = \pm 2 \text{ or } \pm 2\sqrt{-1}.$$

(J. F. MILLIS, Bloomington.)

Let $y = m x$; we then get the following:

SOLUTION. $\frac{8}{1-m^4} = \frac{3}{m(1+m^2)}$ whence $m = \frac{1}{3}$ or -3 .

(J. C. GREGG, Brazil, Ind.)

(By substitution, Prof. Gregg gets the values given above.)

L. N. Fouts of Brownstown, gets the following additional values:

$$x = \pm \sqrt[3]{\frac{1}{2}} \pm \sqrt[3]{\frac{1}{-2}}, \text{ or } \pm \sqrt[3]{\frac{1}{2}} \pm \sqrt[3]{\frac{1}{-2}}.$$

$$y = \pm \sqrt[3]{\frac{1}{2}} \pm \sqrt[3]{\frac{1}{-2}}, \text{ or } \pm \sqrt[3]{\frac{1}{2}} \pm \sqrt[3]{\frac{1}{-2}}.$$

CREDITS.—130, Philip Abell, Velpen 135, Everett Beadles, Velpen;
L. E. Rady, Edwardsville..... 134, 135, Walter N. Vanscoyoc, Crawfords-
ville..... 135, 136, Alton Blunk, Crown Center; Mary Dilts, St. Paul..... 134,
135, 138, Elmer E. Carter, Frankton..... 134, 136, 137, Otto Clayton,
Fowler..... 134, 137, 138, J. F. Millis, Bloomington..... 134, 135, 136, 137, 138,
W. F. Enteman, Leota; J. A. Newlin, Plainfield; L. N. Fouts, Brownstown,
J. C. Gregg, Brazil..... 134, 135, 136, H. S. Burlingame, Sparta.

NOTES AND QUERIES.

QUERY 44. We have received that old problem $x^2 + y = 7$ and $x + y^2 = 11$ to find the values of x and y .

By transposition we get

$$x^2 - 4 = 3 - y \dots\dots\dots (a)$$

$$x - 2 = 9 - y^2 \dots\dots\dots (b)$$

$$\text{Factoring (a), } (x - 2)(x + 2) = 3 - y \dots\dots\dots (c)$$

$$\text{Or } x - 2 = \frac{3-y}{x+2} = \frac{3}{x+2} - \frac{y}{x+2} \dots\dots\dots (d)$$

Substituting in (b), we get,

$$\frac{3}{x+2} - \frac{y}{x+2} = 9 - y^2 \dots\dots\dots (e)$$

$$\text{Transposing } y^2 - \frac{y}{x+2} = 9 - \frac{3}{x+2} \dots\dots\dots (f)$$

Completing the square,

$$y^2 - \frac{y}{x+2} + \frac{1}{4(x+2)^2} = 9 - \frac{3}{x+2} + \frac{1}{4(x+2)^2} \dots\dots\dots (g)$$

Extracting the square root,

$$y - \frac{1}{2(x+2)} = 3 - \frac{1}{2(x+2)} ;$$

$$y = 3.$$

Whence..... $x = 2$.

We have other solutions.

QUERY 45. Another contributor sends us another old puzzle :

Divide 8 gallons of wine (in an eight-gallon vessel) into two equal parts, and use only a three-gallon measure and a five-gallon measure. *Try it.*

QUERY 46. Of the many different correct solutions to Ex. 36, page 254, Indiana Complete Arithmetic, which is the one intended, or the most reasonable.

(WILLIAM R. EDWARDS, Nebraska.)

PROBLEMS.

139. Two cities are 200 miles apart. How high must a person ascend at one, that he may just see the other? Solve by geometry.

W. F. ENTEMAN, Leota.

140. A person reaching the railway station 30 minutes before the train was due, starts to meet it. He walked $1\frac{1}{2}$ miles before he met the train. If he had gone in the opposite direction, he would have been $2\frac{1}{2}$ miles from the station when the train overtook him. What was the train's rate per hour?

ALTON BLUNK, Crown Center, Ind.

141. Which is the better investment, the 10 per cents. at $211\frac{3}{8}$, or the 2 per cents. at $42\frac{1}{4}$? Which is the better investment, if $\frac{1}{8}$ is paid for brokerage?

142. Construct an equilateral triangle in which the altitude is a mean proportional between the side and the base.

143. Given $x+y=10$, and $x\sqrt{y}=12$ to find x and y .

144. I have 3 jars, A, B and C, holding 1, 3 and 5 gallons respectively. A is empty, B full of water, C full of wine. I fill A from B; I fill up B from C, and pour the contents of A into C; I repeat the whole process; how much wine is there in B? In C?

MISCELLANY.

THE NORTHERN INDIANA NORMAL SCHOOL.

The Northern Indiana Normal at Valparaiso has had another prosperous year. This school has had a remarkable history. It was started by its present president twenty-four years ago with thirty-five students. With but few exceptions, every succeeding year has shown an increase in attendance over the preceding year until the year just closed has shown an average attendance of over two thousand and the enrollment for the year will exceed more than four thousand different students. The new departments of biology and higher English started last year have been highly appreciated and largely attended. The coming year it is the purpose of the management to introduce a full course of electrical engineering. As electrical engineers are in increasing demand this department will doubtless prove a great success. This school employs only first-class teachers and does thoroughly whatever it undertakes. H. B. Brown is president and O. P. Kinsey vice-president.

BEGINNING with November, the state board questions in literature and science of teaching, will be based on the new reading circle books.

MONTICELLO.—Six of the Monticello teachers are attending the Cook county summer normal school. The White county normal enrolls over eighty.

THE Law School, in connection with the Indianapolis University, is anticipating a large attendance the coming year. See the advertisement on another page.

THE Worthington summer normal school, under the management of W. D. Kerlin, numbered 174. This was the largest in the state so far as heard from. At the close of the school, the students presented Mr. Kerlin a fine rocking chair.

INDIANA UNIVERSITY, at its last commencement, which was its seventy-sixth, sent out ninety-four graduates. President A. S. Draper, of Illinois University, made the address, his subject being "The Relations of the Individual to the Mass."

SEYMOUR.—"Par excellence" is the term E. A. Remy's paper applies to the high school graduating exercise. It further says that "Prof. Montgomery and his able corps of teachers are to be congratulated on the results of their excellent work."

FORTVILLE had a prosperous year under the direction of J. W. Jay. Its high school has received a commission, and the work generally is well done. Mr. Jay was offered more money to accept another position, but preferred to continue his work at Fortville.

WANTED—TEACHERS AND STUDENTS.—Bright young men and women wishing profitable employment until the colleges and public schools open in the fall, can secure it by addressing President WM. M. CROAN, Anderson Normal University, Anderson, Ind.

PARKE COUNTY.—A successful normal was conducted at Rockville with an enrollment of ninety-nine. County Superintendent Vinzant, J. N. Spangler and George Grosjean conducted it.

MUNCIE is planning for the establishment of a new normal school. The details are not yet all arranged, but County Superintendent Lewellen thinks the school will certainly be established.

THE Young People's Reading Circle enrolled last year 195,000 members, and 40,000 books were sold. This beats the world's record. The prospects are that the coming year will do still better.

THE Fourteenth Annual Catalogue of the Rose Polytechnic Institute, Terre Haute is at hand. It makes a full showing of what the school is doing in its various departments. For catalogue and information address the president, Carl L. Mees.

THE Indiana State Fair will be held this year September 14—17. Extensive preparations are being made, and in some regard it will be superior to the best meeting yet held. For particulars address the secretary, Charles F. Kennedy, Indianapolis.

THE Southern Indiana Normal College has just closed a successful year's work. Twenty-five graduates received diplomas. The school has met all its obligations for the year, has made friends of its students, and has retained the confidence and good will of the community.

UNION CHRISTIAN COLLEGE, located at Merom, Indiana, continues to do thorough high grade work. It is beautifully located on a high bluff overlooking the Wabash river, and the moral influences in the community are not surpassed anywhere. See advertisement on another page.

MARTINSVILLE has added one teacher in the high school and one in the regular corps, making twenty-one teachers in all. The school trustees have let the contract for a new eight-room building. The new superintendent, W. D. Kerlin, will find all things ready and in good working order.

LAPORTE.—The committee on awards of the World's Columbian Exposition has given this city a bronze medal and parchment diploma in recognition of the superiority of kindergarten methods as exemplified in the Laporte schools. Laporte is the only city in the United States thus recognized.

NORTH JUDSON.—The corner-stone of a new eight-room school building was recently laid with ceremony and speeches. The building is to be modern in every particular and well furnished. W. B. Sinclair, candidate for state superintendency, made an address. C. E. Smith is principal of schools here.

It was the Indiana School Book Company, and not the American Book Company that secured from the state board, the contract for the primary and advanced physiologies. The announcement made in the JOURNAL last month was a mistake. The Indiana Company have the physiologies at present, and they are well liked. Under the new contract they are to be revised so as to make them comply with the law, which requires the teaching of scientific temperance.

INDIANAPOLIS BUSINESS UNIVERSITY held its annual commencement June 18. The annual address was made by Rev. F. E. Dewhurst. The graduating class numbered sixty-seven. The enrollment of the school this year has been the largest in the history of the institution. The president is E. J. Heeb.

F. M. HUFF, Warren, Ind., formerly superintendent of Huntington county has some interesting lectures on Bible literature and Bible geography which he would be willing to give to institutes. Mr. Huff did good work for his country in the civil war, he has done good service to his state as educator, and will be glad to continue to be useful in institutes.

WE NOTICE that the Harvard Scientific School has established a department in which teachers may study for a degree and yet be specially trained for teaching scientific subjects. This sort of training has been very much needed by our teachers, and many of the more enterprising are taking advantage of the opportunity Harvard is offering.

FULTON COUNTY.—County Superintendent Fish is using the county papers freely in giving the people information in regard to the schools. In a recent issue he explained the sources of school revenues and other matters of interest. From this article it is learned that every school in the county has started a library. This speaks well. This matter of using the local papers freely should be noted by other superintendents.

IN the list of Indiana teachers in attendance at the Buffalo Summer School of Pedagogy are the following names: Edward Ayres, J. Glasscock, Mary A. Jefferson, Sam O. Lindsay, Flora Roberts, all of Lafayette; W. S. Almond, Delphi; Lydia Blaich, Indianapolis; B. B. Nowels, Rensselaer; Julia Bierbower and Harriet Bierbower, Evansville. The total enrollment is 118, so that Indiana contributes her full quota.

THE twentieth commencement of the Central Normal College at Danville will send out 125 graduates, a larger class than any preceding year. The total enrollment for the year is nearly 2,000 different pupils. The regular classes for next year promise to be larger than ever before. The same faculty, practically, will be in charge. Several hundred dollars will be expended during vacation in papering, painting and other improvements.

COUNTY SUPERINTENDENTS' MEETING.—The county superintendents held their annual state meeting June 25-6. The meeting was fairly well attended and the interest was good. The matters discussed were, as a rule, purely professional and were of interest only to superintendents. It has been the custom for several years past to have the state manual and course of study prepared and published by a committee, but last year the matter was referred to the state superintendent. Mr. Geeting, with the help of his most efficient deputy, F. A. Cotton, did the work so well that the superintendents this year referred to the department the preparation of the outlines for township institutes. W. W. Pfrimmer was president and presided in a way that gave universal satisfaction. He also treated the convention to a sample of "Kankakee" poetry, which was much enjoyed.

PERSONAL.

HELEN SANXAY.

It is with sincere grief that we record the death of Miss Helen Sanxay of Madison. This sad event occurred July 8, after a painful illness of nearly four months.

"Blessing she is: God made her so,
And deeds of week-day holiness
Fall from her, noiseless as the snow;
Nor hath she ever chanced to know
That aught were easier than to bless.

"She is most fair, and there unto
Her life doth rightly harmonize;
Feeling or thought that was not true
Ne'er made less beautiful the blue
Unclouded heaven of her eyes."

As a true woman and teacher the above words most fittingly describe Miss Sanxay as she was in life. Possessed of a strong, attractive personality, deeply sympathetic, brave and tender, children instinctively trusted and loved her. Her influence over the young was remarkable, and this influence was always exerted to enrich and elevate the characters of those within its circles. Her loss is deeply deplored by the people of Madison. The present high standard of the schools of that city is due largely to Miss Sanxay's progressive ideas, her unpretentious, but efficient, faithful labor.

One of her former pupils, now an editor says of her: "She was as near a perfect woman as the handiwork of God afforded."

Another editor says: "In all relations of life she bore herself with dignity and true womanliness, and a prompt response to duty's call was one of her characteristics. Her power and effectiveness as an educator can scarcely be over-estimated. Much of that which is best in our schools to-day originated with Miss Sanxay.

At the time of her death, Miss Sanxay was principal of the first district school and secretary of the Indiana Teachers' Association.

H. S. BOWERS has been elected superintendent at Converse for another year.

A. R. HUYETTE of Huntington will be superintendent at Bristol the coming year.

W. C. McCULLOUGH, class of '96, State Normal, is the new superintendent at Sullivan.

GEV. M. WILSON, class of '96, State Normal, will teach at Alexandria the coming year.

C. L. HOTTEL has been re-elected for a sixth year as superintendent at Portland.

I. S. MORGENTHAUER will remain at Rockport another year as superintendent, and O. P. Foreman will occupy his former position as principal of the high school.

SANFORD BELL will remain at Aurora for the school term of 1896-7.

ROY KEEHN will have charge of the Cromwell schools the coming year.

W. F. CLARK, of Butler College, has been elected principal of the high school at Martinsville.

E. E. ROBEY, formerly of the Kokomo schools, will be a ward principal at Tipton next year.

N. G. BRINDLEY has been employed as principal of the Etna Green schools for the coming year.

F. D. CHURCHILL has been re-elected superintendent of Oakland City schools for another year.

PAUL WILKIE, a graduate of I. U. '96, has been elected superintendent of the Cambridge City schools.

J. W. HAMILTON, superintendent at Monticello, spent a part of his summer at Chicago University.

C. W. VUNCANNON, formerly of Kennard, will be principal of one of the ward schools at New Castle next year.

DAVID R. MAJOR, instructor in Cornell University, will be principal of the Frankfort High School the coming year.

HENRY A. COFFMAN, a graduate of Indiana University, will be superintendent at Middletown the coming year.

MRS. MARY E. F. STEWART has been re-elected principal of the high school at Middletown. This is her third year.

HORACE ELLIS, who was elected at Cambridge City, declined the place to accept the superintendency at West La Fayette.

MISS MARGARETA S. EASLY, formerly a teacher in Noble county, is now teacher of physical culture and elocution, in Pontiac, Ill.

P. P. STULTZ has been re-elected superintendent of the Jeffersonville schools. His schools are reported in first-class condition.

J. HOWARD WAGNER, a graduate of the class of '96, State Normal, will have charge of the Clinton High School for the coming year.

G. W. A. LUCKEY, formerly superintendent of the schools at Decatur, Ind., is Professor of Pedagogy in the Nebraska State University at Lincoln.

MISS LIZZIE RICHERT, principal of Madison high school, is taking a course in English in Chicago University during the summer vacation.

THE Marion school board has engaged Superintendent Virgil McKnight, of Shawneetown, to serve as principal in the Marion high school.

ELMER E. GRIFFITH, who has been doing post graduate work at Harvard for two years past, has been chosen associate professor of English in the State University.

J. W. LAYNE, former superintendent of the Evansville schools, who has been in poor health for the past two years, was recently sent to the insane hospital near Richmond. The statement is made by his friends that his health is failing rapidly, and that the end is not far away. It is reported that Mr. Layne will leave an estate worth \$45,000.

J. W. PARIS, of Pulaski county, has graduated from the State Normal—the first from this county. He has been elected superintendent of schools at Shabouna, Ill.

W. H. ELSON, formerly of Indiana, now superintendent of the schools of Superior, Wis., has closed a very successful year's work and has been unanimously re-elected for another term of service.

F. A. COTTON, deputy state superintendent, will attend a large number of institutes this summer. Mr. Cotton is always a welcome visitor, and he always has some helpful words to speak to teachers.

W. R. SNYDER has brought the Munice schools to a close. The work for the past year has been very satisfactory, and he, with most of his corps of teachers, has been employed for another year.

O. L. LYON, of Greencastle, who spent last year at Boston University studying for a degree in History, has accepted the principalship of the Normal and Business Institute at Steeleville, Mo.

MR. AND MRS. H. H. CLARK, who have had charge of the Odon High School for the past two years, will become members of the faculty of the Southern Indiana Normal College at Mitchell.

W. H. MOORE, an Indiana man, who is known to many teachers, now instructor and student in Chicago University, was offered the position of assistant professor of Pedagogy in Illinois University, but did not accept it.

DR. H. A. GOBIN, who has been acting president of DePauw for the last year, has been chosen president. This is what the friends of the university have been expecting, as Dr. Gobin is a strong man and well qualified to fill the place.

MICHAEL SEILER, a graduate of the State Normal, and fifteen years a member of its faculty, has severed his connection with the school. It is to be hoped that so good a man as Mr. Seiler is will not abandon the educational work.

HOWARD SANDISON has cancelled all engagements for institute work and all writing for the press for some months. He will spend the summer among the Rocky Mountains. We trust that the rest and change will restore him to his usual strength and vigor.

MRS. ADELIA R. HORN BROOK, teacher of mathematics in the Evansville high school, has resigned her position for the coming year. Her text-book, "Concrete Geometry," has been so successful that she has been encouraged to prepare another work for the press during the coming year.

J. C. BLACK, Ph. D., a graduate of the State Normal and also of the New York School of Pedagogy, has returned from St. Louis where he has been at work for the past year preparatory to taking charge of the pedagogical department of the Anderson Normal, which will open September 3.

PROF. CHAS. A. MCMURRY, of the Illinois State normal school, has been granted a two years' leave of absence. He has accepted a position on the staff of University Extension Lecturers of the Chicago University. He will also do some post-graduate work in philosophy and kindred subjects.

SARAH E. COTTON, a former teacher of Henry county, has for the past five years acted in the capacity of private secretary to Dr. John M. Coulter. In June last she graduated from Lake Forest University. She will go to Chicago University and continue as Dr. Coulter's private secretary. Miss Cotton is a sister of F. A. Cotton, deputy state superintendent.

DR. DAVID STARR JORDAN, president Leland Stanford University, has been appointed president of the Behring sea commission, which has gone to the Alaska waters to make an exhaustive study of the sealing question. The appointment caused President Jordan to cancel his engagement to make the address to the graduating class of the state university, and other engagements in the state.

W. D. KERLIN, for several years past superintendent at Worthington, was elected superintendent at Martinsville to fill the vacancy caused by the death of J. R. Starkey. The trustees made a good selection. Mr. Kerlin did a good work at Worthington, and will doubtless make first-class schools at Martinsville. He and his good wife have gone on an extended trip to points of interest on the Atlantic coast.

HORACE S. TARBELL, formerly superintendent of the Indianapolis schools, now superintendent of Providence, R. I., has been doubly honored. Both Brown and Wesleyan Universities have recently conferred upon him the honorary title of LL. D. This was an honor that was merited. Dr. Tarbell is scholarly, and is one of the leading school men of the country. Last year he was president of the National Council of Education.

A. H. YODER has been elected president of Vincennes University, to take the place of E. P. Cubberly, resigned. Mr. Yoder is a graduate of Indiana University, has been two years principal of the normal and training school, San Francisco, Cal., and has spent one year in post graduate work in Chicago University. Mr. Yoder is a hard worker, has high ideals, and is likely to make the University all that it has ever been—a first-class prosperous school.

J. N. STUDY, for many years superintendent of the Richmond schools, was recently elected superintendent of the Fort Wayne schools. This is a promotion for one of Indiana's leading educational men. Mr. Study has stood high in the councils of Hoosier educators for many years. He has served as superintendent at Anderson and at Greencastle, giving good satisfaction in both places. He leaves a host of warm friends in Richmond. Going to Fort Wayne will make Mr. Study a member of the State Board of Education. He is well qualified for the work of this board. His ability and his integrity will never be questioned.

T. A. MOTT, for the past year superintendent of the Madison schools, was recently elected superintendent of the schools at Richmond. Mr. Mott was for many years a resident of Wayne county. He graduated from the Richmond High School, and afterward attended college at Oberlin and Earlham. He was four years superintendent of the schools at Dublin, and afterward served four years as superintendent of Wayne county. He was counted one of the best county superintendents in the state. A year ago he accepted the superintendency of the Madison schools, and has done there a year's work commended by all who have known of its merits. To be called back to his old home to so important a position is a compliment of which Mr. Mott may justly feel proud.

BOOK TABLE.

HARPER'S ROUND TABLE is a weekly paper for boys and girls. It is filled with fresh and interesting matter. Out-of-door sports and games, good entertaining stories, jokes and puzzles all receive attention at the hands of its editor. It is a source of pleasure in any household. Price \$2.00 per year.

THE August number of *Harper's Magazine* is a beautifully illustrated mid-summer number containing among its many attractions a paper by W. D. Howells who gives his personal recollections of "The White Mr. Longfellow," who in Mr. Howell's opinion was the greatest of the Boston group of literary men.

SPECIAL METHOD IN SCIENCE. By Chas. A. McMurry of the Illinois Normal School. Published by the Public School Publishing Co., Bloomington, Ill. This is the fourth of a series of special methods in the common school studies and is designed to be a direct help to teachers in recitation. One of the problems in nature teaching is finding some basis for selecting and arranging important and suitable topics. Pedagogical considerations have, in the main, determined the basis and the order for the topics here presented. The endless variety in nature is bewildering to children and is little calculated to give an idea of the great underlying harmony. Types have therefore been selected, each of which is worked out in detail and around which many important facts are correlated. The type studies pave the way for the recognition of general laws. A large number of topics for first and second grade, worked out and used by Mrs. Lida B. McMurry in primary classes is given in full. A list of about 100 helpful books, carefully selected and classified with the name of publishers is given for the aid of teachers. Price, 50 cts.

THE *Riverside School Library* is quite a distinct thing from the *Riverside Literature Series*. The same standard books may be found in each series' but those in the Riverside School Library are more beautifully and durably bound, have received better care in their execution and are handsome books for any library. These books are the result of the study of many years on the part of the publishers. It has been their wish to meet the increasing demands for books suitable for school libraries by the publication of the choicest and best material, in books of superior manufacture, at the lowest possible price to the purchaser. FRANKLIN'S AUTOBIOGRAPHY is the book of this series under present consideration. This contains a portrait of Franklin an appendix and a very complete index, besides the well-known autobiography of this most distinguished American philosopher. It is neatly bound in half Russia leather with gilt lettering. It sells for the very moderate price of 50 cts. This month, Houghton, Mifflin & Co., will issue the following 10 books in the Riverside School Library;—Andersen's Stories, 50 cts. ; Cooper's The Last of the Mohicans, 70 cts. ; Fiske's War of Independence, 60 cts. ; Franklin's Autobiography, 50 cts. ; Goldsmith's Vicar of Wakefield, 50 cts. ; Holmes's Autocrat of the Breakfast Table, 60 cts. ; Lamb's Tales from Shakespeare, 60 cts. ; Mrs. Stowe's Uncle Tom's Cabin, 70 cts. ; Scott's Ivanhoe, 70 cts. ; Scudder's George Washington, 60 cts.

THE *June School Review* is an excellent issue of this educational periodical. It contains a tabular statement of the entrance requirements in the leading colleges and universities of the United States. This table has been prepared with great care and will be a reliable authority for all interested in the subject. 128 pp. ; price 20 cts. Published by the University of Chicago.

A. R. HARDESTY, Superintendent of Schools, Hobart, has arranged an Institute Record and Grade Book for the use of township institutes and teachers' meetings. It is arranged to keep a complete record of the attendance, punctuality, work, etc., of each teacher as well as the minutes of each meeting. It is arranged to last five years and costs but \$1.50. It is but just to teachers that their record as workers in the township institute or teachers' meeting should be correctly kept. School officers need such information in concise and convenient form.

Mr. Hardesty has also prepared a Librarian's Record for the use of district, town, and city schools. It is arranged with special reference to the Young People's Reading Circle work, and should be in each school room where a library is kept. The Reading Circle Board has arranged to furnish diplomas to members of the reading circle for four years, but as yet they have no way of keeping a record.

SPENCERIAN VERTICAL PENMANSHIP: Shorter Course, Nos. 1 to 7 per dozen, 72 cents. Common School Course—Nos. 1 to 6, per dozen, 96 cents. American Book Company, New York, Cincinnati and Chicago. Ever since vertical writing began to receive attention in American schools there have been two difficulties in the way of its progress; first, the clumsy, ungraceful style of the letters offered as models for imitation, and second, the slow and tedious movements induced by tracing or rather drawing such awkward forms, making vertical writing, as taught in the schools, practically worthless for business purposes. An examination of Spencerian Vertical Penmanship, as represented in the new series of Vertical Copy Books recently published by the American Book Company, will show that the forms and letters are all symmetrical and graceful and lend themselves naturally to rapidity and legibility—the two prime requisites for good writing. The transition from the slanting to the vertical hand is easy and natural, so that teachers and schools desiring to try the vertical style of writing may do so under the most favorable conditions by adopting the Spencerian Vertical Penmanship.

Delicious Drink.

Horsford's Acid Phosphate

With water and sugar only, makes a delicious, healthful and invigorating drink. Allays the thirst, aids digestion, and relieves the lassitude so common in midsummer.

Dr. M. H. Henry, New York, says: "When completely tired out by prolonged wakefulness and overwork, it is of the greatest value to me. As a beverage it possesses charms beyond anything I know of in the form of medicine."

Descriptive pamphlet free. Rumford Chemical Works, Providence, R. I. Beware of substitutes and imitations.

INDIANA SCHOOL JOURNAL.

BUSINESS NOTICES.

SCHOOL BOARDS contemplating changes can learn the address of the best Western and Eastern teachers, willing to change places, by addressing Orville Brewer, manager of the Teachers' Co-operative Association, 101 Auditorium Bldg., Chicago. We can assure all who write of confidence and honorable treatment. 2-tf.

WANTED.—To pay liberal commissions to a limited number of first-class solicitors. Good teachers make excellent records in introducing Zell's Condensed Cyclopedia to township trustees, teachers and superintendents. The *new* edition of this popular work contains maps, illustrations, pronunciation, X rays, and admission of Utah, January 4, 1896. Work profitable to those who can address themselves to it steadily.

If you are a good solicitor and wish to consult your financial interests, try Zell's Condensed, "the best work now on the market for school and family use."

For further particulars and choice of territory, address, with stamp for reply,

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IF YOU WANT to be successful in business life attend the Indianapolis Business University, the leading Business, Shorthand and Penmanship School 11-tf

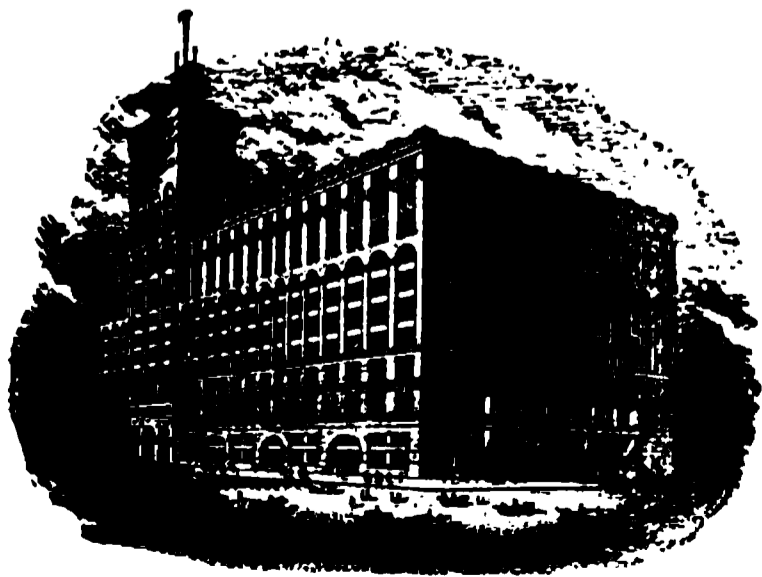
THE Lake Erie & Western Railway Company will run an excursion to Niagara Falls, August 6, at less than *one-fourth* the regular fare. See advertisement on another page.

WANTED—TEACHERS AND STUDENTS.—Bright young men and women wishing profitable employment until the colleges and public schools open in the fall, can secure it by addressing President WM. M. CROAN, Anderson Normal University, Anderson, Ind.

AGENTS WANTED by large factory. Free outfit. Many teachers handle. One earned \$40 a week last year. Many \$10. P. O. Box 1371 New York. 6-ft

TEACHERS can secure profitable employment with Heeb Publishing Co., Indianapolis. High class works; big pay. Write for information.

THE MUNGER.—On another page will be found the advertisement of the Munger Cycle Company. There is no doubt that this company makes the best light wheel in the market. Only the best of material is used and every wheel is "*high grade*." It always pays to get the best. It is the cheapest in the long run. Call at office or write for descriptive circular.



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INDIANA SCHOOL • JOURNAL

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THE TEMPEST.

ROBERT M. KING, INDIANAPOLIS HIGH SCHOOL.

The Tempest is a story of enchantment. "If I read it rightly it is an example of how a great poet should write allegory, not embodying metaphysical abstractions, but giving us ideals abstracted from life itself, suggesting an undermeaning everywhere, forcing it upon us nowhere, tantalizing the mind with hints that imply so much and tell so little and yet keep the attention all eye and all ear with eager, if fruitless, expectation."—*Lowell*.

My purpose, simply put, is to discuss briefly, first, the means Shakespeare has used to give this perfectest of his dramatic creations the air of reality and, second, the undermeaning of the play.

When the story-teller is dealing with such fantastical and impossible matters as we find in The Tempest, one of the difficulties that he meets is to produce the effect of reality. For while we, in this hard matter-of-fact nineteenth century, never for a moment believe what we read of the strange doings on Prospero's island, yet there is a way in which we must live in the story, just as we do while reading one of Frank R. Stockton's fanciful tales. If I might so surround the story of an encounter with a great, greenish-yellowish-blue dragon, with such details as would interest you in the tale and give it an air of reality which would prevent your thinking the author subject to the hallucinations mentioned in the Scientific Temperance questions, I should succeed in doing for a somewhat improbable experience what Shakespeare does so admirably in The Tempest. Here is an improbable story into which witches, spirits and fairies are introduced, which we read

with interest and which, in spite of the fact that we know it is fantastical and impossible, has an air of reality. This atmosphere of reality is produced in ways, a few of which it is our purpose to mention.

The story introduces natural elements, men and women, an island, trees, a storm, and a ship. It introduces supernatural elements, too,—Prospero's mysterious power, Ariel, Caliban, Sycorax, harpies, etc. The natural elements are so selected that they gradually remove us from the commonplace and they take on the air of the supernatural. This is the first means employed to make us feel at home in the story. On the other hand, the supernatural is so modified by the suggestion of relation to the natural that the effect of reality is heightened. This is the second means. Thirdly, Shakespeare has introduced two instances of actual human experience which have close relation with enchantment, and this constitutes the third means of which I shall speak.

To take them up in the order mentioned, it would be impossible to get the atmosphere of the supernatural in the commonplace scenes with whose every detail we are familiar—in the country, even, of whose general characteristics we have a strong impression. So Shakespeare has begun by choosing as the scene of the play a desert island, seemingly uninhabited, seemingly inaccessible, whose whereabouts is not the possession of the world, but "known only to a few sailors and to ocean currents which sometimes convey men to it by 'accidents most strange' by 'providence divine and 'by bountiful fortune.' " It is guarded by a belt of storms and protected by forbidding cliffs.

He farther removes it from commonplace experiences by making every detail hint external nature. There is no suggestion of life indoors. The island, forbidding outside, is found to be of "wondrous charm" once the boundary is passed; it is "of a subtle, tender and delicate temperature," to quote Gonzalo; "the air breathes most sweetly," the grass looks lush and lusty. Every element of life named belongs to outdoors. Would you consider dwellings? They are cells, "weather-fenced by line-groves," Prisons? The rift of a cloven pine, the knotty entrails of an oak. Labor? It is to fetch wood for fires and make dams for fish. Education? It is to name the bigger and lesser lights that burn by day and night. Food? Fresh brook muscles, with-

ered roots and husks of acorns. The treasures are the treasures of nature. Listen to Caliban:

"I prithee, let me bring thee where crabs grow;
And I, with my long nails, will dig thee pig-nuts;
Show thee a jay's nest and instruct thee how
To snare the nimble marmoset; I'll bring thee
To clustering filberts and sometimes I'll get thee
Young scamels from the rocks."

This emphasis of out-door life prepares us for the introduction of elves and gnomes and fairies. It is just such scenery tradition has linked with fairy life. "Its hills, brooks, standing lakes and groves have each its band of elves; the long reaches of the yellow sand are a play-ground for the fairies, who now chase the ebbing Neptune and now fly from him when he comes back and foot it featly here and there, while the wild waves hush themselves to be spectators of that dance, sweet sprites hum the music and cheerful farmyard sounds of barking dogs and crowing cocks come in pat for the chorus." It sets Gonzalo to thinking of the golden age when "civilization should not be known, no traffic nor name of magistrate, no riches; poverty or service, no use of metal, corn or wine, or oil, no treason or need for weapons, but nature should pour forth of its own kind all foison, all abundance to feed the innocent people." Reading the play, we feel ready to believe in any sprite, fairy, monster, harpy the mighty Elizabethan is ready to introduce to us.

This means of accomplishing his end by removing the setting to those things of nature farthest removed from the commonplace is carried on from the still life to the inhabitants of the island. Consider for a moment Miranda and Caliban. What a charming, naive creature Miranda is! In beauty she is "created of every creature's best." Brought up without sight of one of her own sex, she is possessed of a simplicity, that in the delicate handling of the master of fine perceptions, gives her in the most beautiful love scene in literature, a straight-forward impulsiveness which is never repulsive forwardness. All her creed is simple faith in beauty. She has the natural feeling that a fair outside must mean a fair inside. When Ferdinand is accused she says impulsively:

"There's nothing ill can dwell in such a temple;
If the ill spirit have so fair a house,
Good things will strive to dwell with't."

"If you twist the word 'Caliban' a little, you have the word 'cannibal' and are removed at a single bound to the opposite pole from Miranda." Caliban is a wild man of the woods. He does not enter into commonplace experience, yet he is strangely linked to man too. In a single conversation between Prospero and Caliban, Shakespeare, as Ulrici points out, hits off the whole relation of white man and savage. First, dispossession of the savage by the white man:

Caliban— This island's mine by Sycorax, my mother,
 Which thou takest from me.

Second, early and pleasant relations between the two, the white man pets the savage:

Caliban— When thou camest first
 Thou strokedst and madest much of me; would'st give me
 Water with berries in't.

Third, this is followed by an interchange of good offices:

[Thou wouldest] "teach me how
To name the bigger light and how the less,
That burned by day and night; and then I lov'd thee.
And showed thee all the qualities of the isle.
The fresh springs, brine pits, barren planes and fertile."

Fourth, there comes the usual outbreaking of the savage nature, fixing a moral gulf between them that forbids further intercourse. And, thereafter comes, the forced domination of the white man:

 "Therefore was thou
Deservedly confined into this rock,
Who had deserved more than a prison."

A later scene discloses another picture undeniably true of the history of the relations of the two—the gift of "fire-water."

Now let us consider how the supernatural has been modified by suggestion of relations with the natural.

It has already been hinted that there must be a gradual change from the natural to the enchanted, lest the abrupt transition bewilder and destroy our interest. Have you noticed the device Shakespeare uses to connect the realm of enchantment with the realm of nature? It is music strangely linked with dreamy slumber. It is a most natural device, is it not? How often have you when half asleep, and a little more, realized the glorious apotheosis of the strains of some wheezing accordion or strumming guitar or

twangling mandolin accompanying raspy basses and piercing falsettos? The serenade then is as divine as any that ever swept through the seraphic mind of Beethoven or brought tears through exquisite sweetness. Music wafts us over from the real to the enchanted—

“The isle is full of noises,
Sounds and sweet airs; that give delight and hurt not.
Sometimes a thousand twangling instruments,
Will hum about mine ears, and sometimes voices
That, if I then had waked after long sleep,
Will make me sleep again: and then, in dreaming,
The clouds, methought, would open and show
Riches ready to drop upon me; that when I waked,
I cried to dream again.”

When the music breaks out in the play, it heralds some supernatural event. But one does not need to be half asleep to realize the emotional effects of music. Emerson says in “The Problem” of the elevating effects of great church architecture:

“—On my heart, monastic aisles,
Fall like sweet strains.”

And certainly there is a moral uplift in all noble music.

Of the other means employed, I shall mention but one. The most striking supernatural creatures, Ariel and Caliban, are simple nature humanized or personified. To humanize nature is the whole business of magic. Poets have always endowed the elements with tempers and sympathies and passions. That is the secret of the beautiful tales of mythology, you tell your pupils. This is the secret of Thor, Woden, the Titans, Apollo and Zephyrus, sylphs of air, naiads of water, salamanders of fire, gnomes of earth. Shakespeare creates two elemental beings, Ariel and Caliban, embodying the four elements of nature, air, water, earth and fire.

Ariel clearly is air and fire. His name suggests the first, but there is other evidence, “his natural speech is music, waves of air.” He is distinctly addressed as, “Thou that art but air.” He is moody, capricious, “the wind bloweth where it listeth.” He is as clearly *fire*. In describing to Prospero his work in the storm which produced the shipwreck, he does not say when speaking of himself as lightning that he *sets* the ship afire, but says instead:—The ship was all afire *with me*:

"Now in the waist, the deck, in every cabin
I flam'd amazement: sometimes I'd divide
And burn in many places; on the topmast,
The yards and bowsprit, would I flame distinctly."

He was air and fire. Says Moulton: "He is invisible, but like the lightning, can take shape as he acts. Like air and fire he can penetrate everywhere, treading the ooze of the salt deeps, running upon the sharp wings of the north, doing business in the veins of the earth when it is baked with frost." His ideas are liberty and omnipresence. He wishes to be "free as mountain wind, live on the bat's back merrily, couch in the cowslip's bell, live under the blossom that hangs from the bough."

Caliban as clearly stands for earth and water. His father is the Devil, his mother the former spirit of the island, the "blue-eyed hag, Sycorax," with age and envy grown into a hoop. He bears evidence of his muddy nature. How is he addressed? "Thou, Earth, thou!" "Monster!" "Moon-calf!" "Disproportioned shape!" Every name is suggestive of the disproportioned earth-gnome, a Palmer Cox Brownie robbed of its idealization. His connection with water is shown by his being addressed as "fish," "fish-monster." There is that amusing picture of Trinculo, the fool, bewildered by the approach of the storm, coming upon Caliban who has fallen flat, hoping to escape notice. [Trinculo] "What have we here? A man or a fish? Dead or alive? A fish; he smells like a fish; a very ancient and fish-like smell; a kind of not-of-the-newest-poor-John A strange fish! A strange fish!"

So there is a running joking upon this poor creature, whose not very ethereal nature is expressed in the words describing his birth:

—"The son that Sycorax did litter here.
A freckled whelp, hag-born."

The third means employed to give reality to the play is the introduction into the plot of real happenings and natural relations, which in actual life are akin to enchantment. The first of these is the love story. I should like to know if love is not something akin to enchantment? And this is a beautiful love-story. It has none of the blood-red, lurid passion of Romeo and Juliet. It is "the first rays of the morning sun, announcing a lovely spring day, and looking down timidly and blushing over the mountain

top into the valley." It is love at first sight—clearly enchantment you see.

Prospero— The fringed curtains of thine eye advance
 And say what thou seest yond.

Miranda— What is it? A spirit?

Ferdinand, drawn on by the sweet music, sees her, starts and says :

“Most sure, the goddess
On whom these airs attend.”

They have the joy, these lovers, of immediate betrayal of their feeling.

Miranda— This is the third man that e'er I saw,
 The first that e'er I sighed for.

Lucky dog ! Lucky Ferdinand !

The course of true love, like the road to heaven, is not “down through flowery meads,” but up the steep where “by battle flashes it gropes a desperate way,” so on Ferdinand is imposed Caliban's task, log-bearing. But, like that heavenly road, the end of this, too, brings fresh delights.

Miranda— If you'll sit down I'll bear your logs the while ;
 Pray, give me that, I'll carry it to the pile.

But Ferdinand, pulsating with delight :

“No, precious creature ;
I'd rather crack my sinews, break my back
Than that you should such dishonour undergo
While I sit lazy by.”

The clouds roll by, however, and in their parting we see the lover's game of chess and their seventh heaven.

The second phase of real life which has somewhat akin to enchantment is the scene where the gloriously drunken Caliban crowns Stephano and his bottle. Intoxication is truly illusion and enchantment, else men would not stand on the bridge at midnight to see two moons rise over the city ; or carefully stand up in the hall tree all night after putting the umbrella as carefully to bed. Shakespeare, true to his artistic sense, has not represented drunkenness in its loathsome, wicked, sorrow-producing aspects, but only in its transforming power. Caliban is transformed into a worshipper, the drunken butler into his god. Caliban, after a few pulls at the glorious bottle, says :

"Hast thou not dropped from heaven?"

Stephano: Out o' the moon, I do assure thee;
I was the man-i'-the-moon when time was.

Caliban — I've seen thee in her and I do adore thee.
I will kiss thy foot.

What a beautiful picture the three drunkards make as they stumble under Ariel's spell, scratched by briars and torn by branches, through bogs up to their chin. They are sallying off to dispossess Prospero—

"So full of valor that they smote the air
For breathing in their faces; beat the ground
For kissing of their feet."

Arrived, still drunk, Prospero charges the spirits to

"Grind their joints
With dry convulsions; shorten up their sinews
With aged cramps."

The last true touch is where Caliban says, awaking from this natural enchantment of drunkenness:

"I'll be wise hereafter
And seek for grace. What a thrice double ass
Was I, to take this drunkard for a god
And worship this dull fool."

In this hurried way, I have endeavored to direct your attention to Shakespeare, the dramatic artist, and the three means used to force us to live in the story as we read it or see it. The final word is concerning some of its beautiful undermeanings.

Many critics have hinted that Shakespeare represented himself in Prospero. This seems to be true, though it was probably not consciously intended. Who else is Prospero but the great artist himself "who has forfeited," says Lowell, "a shining place in the world's eye by devotion to his art, and who, turned adrift on the ocean of life in the leaky carcass of a boat, has shipwrecked on that Fortunate Island (as men always do who find their true vocation where he is absolute lord, making all the powers of nature serve him." Of whom else than himself was Shakespeare thinking when he said:

"Graves at my command
Have waked their sleepers, oped and let them forth,
By my so potent art "

"Was this man," Mr. Lowell continues, "so extraordinary from what side we look at him, who ran so easily through the whole gamut of human sentiment from the homely common sense of

'When two men ride of one horse
One must ride behind'—

to the transcendent subtlety of

'No, Time, thou shalt not boast that I do
Change; thy pyramids built up of newer might
To me are nothing novel, nothing strange;
They are but dressings of a former sight.'

"Was he alone so unconscious of powers, some part of whose magic is recognized by all mankind, from the schoolboy to the philosopher that he merely sat by and saw them go without the least notion what they were about? Was Shakespeare an inspired idiot? Was he a vast, irregular genius? A simple rustic warbling his wood-notes wild? Was he insensible to the benefits of culture? When attempts have been made at various times to prove that this singular and seemingly contradictory creature, not one man's but all mankind's epitome, was a musician, a lawyer, a doctor, a Catholic, a Protestant, an atheist, an Irishman, a discoverer of the circulation of the blood, and finally, that he was not himself but somebody else, is it not odd that the last thing anybody should have thought of proving him was an artist? Nobody believes any longer that immediate inspiration is possible in modern times, (as if God had grown old) and yet everybody seems to take it for granted of this one man, Shakespeare." For me, one of the subtle undermeanings of the play, not consciously intended, is that Prospero is truly Shakespeare. All the magic Prospero was capable of is but a candle-light beside the luminous power of Shakespeare's mighty sun.

Aside from this I think there are undermeanings in the play more or less consciously intended. One is that the play is founded on the idea of the guidance of a personal Providence. Prospero is the representative of Providence, dealing with the affairs of men. This furnishes the reason of the necessity of creating a world of magic, since it would be absurd to have a man dealing with the ordinary affairs of life in the capacity of director of men's fortunes. Prospero directs the tempest and brings the mariners safe ashore. It is Prospero, through Ariel, who draws Fer

inand to Miranda's presence, soothes to sleep the king, honest old Gonzalo, Adrian and Francisco, the nobody lords; leaving Antonio and Sebastian to do their murderous plotting. It is Prospero in reality who comes into the death-like stillness as the distant sighing of the wind, which comes nearer, plays with the white hairs of aged Gonzalo, takes human voice and sings into his drowsy ear:

"While you here do snoring lie
Open-eyed conspiracy
His time doth take;
If of life you have a care,
Shake off slumber and beware;
Awake! Awake!"

Thus Prospero directs that actual murder be not committed. In the funny business referred to in my brief discussion of the intoxication scene, we have the hand of Prospero, leading, through Ariel, the drunkards on to justice, but exercising providential economy through making most of their punishments the natural consequences of their stupidity and wickedness.

Judgment reaches its climax as guided by Prospero, representing personal Providence as in the third act, where we have the magician's nemesis on his persecutors.

The idea of the nemesis is this. Men are more or less bold creatures until their confidence in the established order of things is shaken. As long as the earth is solid beneath our feet, we are strong to carry out our petty meanesses and small activities; but when the earth quakes, our courage like that of Bob Acres oozes quickly through our finger tips. Prospero leads the party who had done him so ill a turn and the naughty conspirators through such a series of *unnatural* events that the poor weaklings have their confidence gradually "sapped by the quality of this isle." They do not know what will happen next. And when one can not know that, one is bewildered and scared. This feeling on the part of Antonio & Co. reaches its climax in the scene where the banquet table vanishes and Ariel in the guise of a harpy, addresses them, denouncing their dastardliness and pronouncing penalty. It is impossible to pass this scene without noting that after Ariel has passed sentence of madness, he concludes his speech by displaying an attribute of genuine Providence—the opening of an avenue of escape. It is the Christian eden, "true heart sorrow and a clear life ensuing."

Ariel—

Thee of thy son, Alonzo,
They have bereft; and do pronounce by me
Lingering perdition—worse than any death
Can be at once—shall step by step attend
You and your ways; whose wraths to guard you from,
Which here, in this desolate isle, else falls
Upon your heads—is nothing, but heart sorrow
And a clear life ensuing.

This is the ethical plane of the New Testament.

There is a higher climax still. It is the climax of *mercy*, suggesting Providence still. Prospero makes universal restoration: Alonzo to his kingdom; Ferdinand and Miranda to each other and to their bereaved father; Ariel to liberty; Caliban to his island; and Gonzalo significantly adds:

"All of us to ourselves
When no man was his own."

Nay the restoration goes farther and we have the ship which in the first scene we beheld storm-racked, sink to the bottom of the sea, re-appear in the last in all her gallant trim, "her master capering to behold her."

Thus does Prospero act as ruling Providence through four hours of a summer's afternoon and reads us a deep lesson of our insufficiency and our weakness in the hands of an over-mastering God.

There is but one other word. Ulrici's notion that the play is typical of the hurry and tumult of individual life, of national life, and of the cosmic life seems the correct one. Some have thought the title, "The Tempest," to have little bearing on the idea of the play. But it seems in our study to have identity with the unity of the whole movement. You must have observed that there is hardly any advancing action in the play, but a restless and constant change of conditions. Life is agitated by a tempest—agitated by heterogenous and conflicting elements, which have come into collision seemingly by accident—agitated by that mysterious power men call fate; that is, by the spirit of creative forces of nature and history—that is, by the will of God.

The whole play suggests something in your life and in my life. There are times when we seem restlessly driven to and fro, when we cannot take our bearings, when we cannot count on the next stroke; a state of life which we find, on looking back at it, to have been a new birth; beginning better fortune when we, like

Gonzalo at the hand of Prospero, "have been restored to ourselves," our real selves, our higher selves, at the hand of Providence. The rapid fluctuations from serious to comic, from good fortune to bad, from noble diction to the low mouthings of drunken fools intentionally heightens the impression of these creative tempests of personal life, and of national life, too. We have, under God, like all nations, periods of unrest as a nation, when old things seem tottering to their fall around us, but we find, like the lucky crew in Shakespeare's comedy that, out of the storm of change and perplexity we come into fair havens—"that God reigns and the government at Washington still lives."

Finally the play deepens for some of us, the sense of frailty and temporal qualities of life on this little, spinning ball; deepens the sense that it is not our home, awakens "that vexing, forward-reaching sense, of some more noble permanence." To every thoughtful teacher who has studied this play, the great words of Prospero are not in any sense separate from the deep under-meaning of the beautiful comedy, but vitally connected thereto:

"Like the baseless fabric of this vision
The cloud-capp'd towers, the gorgeous palaces,
The solemn temples, this great globe itself,
Yea, all which it inherits, shall dissolve;
And, like this unsubstantial pageant faded,
Leave not a rock behind. We are such stuff
As dreams are made on, and our little life
Is rounded with a sleep."

MUSIC IN THE COMMON SCHOOLS.

W. E. M. BROWNE, KNIGHTSTOWN.

As the time for school approaches, houses are renovated, books brought from their hiding places, teachers are busy with their arrangements for the coming winter's work and the question, "What shall be done for the country schools in the way of music, that they may keep pace with their more fortunate and ambitious neighbors of the cities and towns who enjoy the privileges of a supervisor and good text books", becomes more and more the problem of the hour. More than one county superintendent in Indiana is trying hard to discover the solution to this problem.

not only to his own and the township trustees' satisfaction, but to that of the teacher as well, who, more than any other person, feels the responsibility as well as the weight of the work necessary to put his school in line with the growing idea among educational people that music as a study should be taught. That the idea is growing, is a fact, and many a school whose curriculum has never known such a thing as a music text book will, the coming winter, have in the program written upon the blackboard as the daily order of business, the suggestive words, "11:40-12:00, Music," said time not to be filled in with the singing of a few musty, screechy songs drawled out by the pupils, while the teacher makes up his roll, or examines a pile of written work, but by a real, earnest music lesson, in which all shall take part and which shall become a looked-for feature of the day's work, the time when droning over lessons will cease, the sleepy boy will awaken, and even the culprit in the chair of disgrace may be temporarily absolved from his penance and by an exercise universal, begin anew the day with his fellow pupils.

Experience shows that about nine of every ten teachers can sing, more or less, or at least "carry a tune;" and that probably half that number play, to some extent, some musical instrument; so that with the knowledge of just what to do given them in a manner easily understood, few will be found who cannot find the time to conduct a very satisfactory music lesson of from fifteen to twenty minutes each day, in which the practical study of the art of singing and the principles of vocal music shall be set forth. The cry of "no time for music," which really means "no knowledge," would be a thing of the past.

The county institute too often leaves the mind of the young teacher in chaos; and the attempt to recall all which has been said during the lectures, becomes so prostrating that only a discouraged "I cannot" is the result, after which he gives up in despair.

To obviate this difficulty, let us endeavor to call to mind as may be needed the rattling talk of Prof. Polychromatic, and a little at a time, apply it in our daily study, and see if the music lesson will continue to be the "bugbear" that it has heretofore seemed to be.

Every teacher should have in his desk a "pitch-pipe"—a little tube made of German silver, expressly for use in schools—which

has on one end the letter "G" and on the other the letter "C." These cost but a trifle and are a great help in obtaining the correct pitch where a piano or organ is not available. By blowing in the end marked "C," you will get the sound represented in the third space in the staff and the eighth sound of the scale beginning on middle "C" of the piano. The other end will give "G," the second line of the staff.

While singing or indulging in any kind of vocal exercise, the position should be erect, if sitting, the back not touching the seat; or if standing, a perfectly natural position, with the feet firm on the floor, so that the effort in breathing will be an easy one. The following exercises will be found of great help in the development of proper breathing and formation of correct sounds.

Inhale all the air possible, then at a signal exhale quickly without making any sound. (Mouth wide open.) Again inhale as before and let the air escape slowly under perfect control until the lungs are emptied. Now repeat the exercise and force the breath out, making the sound of the aspirate "H," and do this until the novelty has worn off so that the boys will do it seriously. Ask the pupils to place their hands upon the waist at the sides just below the ribs, and to note whether the hands move when the breath is drawn in and out. In making the sound of "H," the hands should move, and if they do not the pupil should be made to take long breaths until he understands that the proper breathing force must come from the diaphragm and not the chest. The tendency to breathe above the waist line should be corrected by exercises in deep breathing. Correct vocal sounds are made with the mouth and lungs, not with the throat. The entire attention must be given to the breath and the position of the lips, tongue, teeth and chin. The throat must be kept open and unobstructed. Each vowel and consonant sound has its own peculiar position, and to have such perfect control of the members entering into their formation, that instantaneous action may be had, is the secret of good singing. This is the reason for dwelling upon this part of the work in the beginning.

Begin by using the consonants "H," "P," "F," "K," etc., pronouncing their sounds (not their names) with all the force possible; being aspirates, they will call attention away from the throat to the lips and tongue, which is the object sought. Then by adding the vowel "O" to these consonants, beginning

with a husky "HO," gradually increase the sound until a short, clear sound is produced, after which use "PO," "FO," "TO," "KO," etc. Change the vowel to "a," as in "father," dropping the chin until the cheeks are drawn in slightly and practice the same exercise. Next have them hold, or prolong the vowel sound for two or three seconds (HO-O-O) without changing the position of the mouth, and a clear musical sound should be the result. These exercises should be gone through with in an ordinary tone of voice, at about the pitch obtained by blowing the "G" end of the pitch pipe, and for a time a few moments daily should be devoted to this kind of work, until good sounds can be properly made.

Care must be taken that the sounds are not pitched too low, as children's voices are not natural when the tones are made so low as to sound guttural.

Having learned to make satisfactory to the ear the musical sound, the next step is to study its representation to the eye. For this purpose we take up what is known as "the scale," a thorough knowledge of which is necessary, in order to become able to read music language readily.

The scale is a succession of eight sounds, each a step higher in pitch than the other, and may be best learned by going to a piano or organ and beginning with the key known as "middle C," the location of which may be found in any piano or organ instructor, singing the eight sounds produced by striking the eight white keys to the right. Call the sound made by "middle C" 1, the next 2, 3, and so on to eight. Sing these over until you have them in your mind so you can sing them the following day for your school. After you have made them understand this scale so they sing it up and down, you will have no more trouble, as they now have a start, and in the future will work out their own musical problems. Sing it 1 2 3 4 5 6 7 8 and 8 should be the same sound as that produced by blowing the "C" end of your pitch-pipe, so that in order to get the correct start in your scale you will have to sing the scale, 8, 7, 6, 5, 4, 3, 2, 1. Practice singing this scale up and down until they sing it easily and correctly, after which take up such exercises as the following which are to be sung first with the names 1 2 3 4 5 6 7 8, then the syllables,

Dō, Re (Ray), Mē, Fā, So, Lā, Ti (Tee), Do. Then Lā, Lā, etc. Then Lā etc., Lēē etc.

1 2 3 2 3 4 5 4 3 4 5 4 3 2 1. 3 4 5 6 7 8 7 6 5 6 5 4 3. 5 4 3 2 1 2 3 4 5 5 6 5 6 7 8. 8 7 6 5 6 5 4 3 4 3 2 2 1. 3 2 3 2 1 2 3 4 5. Put a number of these exercises on the board, always beginning with 1, 3, 5, or 8, and using consecutive numbers and sing them through as above outlined. The sounds 4 and 7 will need the most attention. The number of these exercises is limited only by the versatility of the teacher. At least two years can very profitably be spent with this kind of work among primary pupils.

The next step is to learn to skip over a sound to the next, thus: 1-3, 3-5, 5-8. To do this have the school sing 1, 2, 3, then sing 1 loudly, 2 softly and 3 loudly. Repeat this until understood, then have them sing 1, think 2, and sing 3. In this manner learn the interval 3-5 and 5-8. When able to sing these intervals, 1-3-5-8, then write exercises in figures in which these intervals occur, and practice them in the same manner as in the previous lessons. Pretty little melodies may be constructed in this way and sung to words to the great delight of the school.

For the older pupils who will naturally want to progress faster, draw the staff on the blackboard, consisting of five horizontal straight lines, equi-distant about one inch. Connect at the ends with vertical bars. On this place eight notes like this:

EXAMPLES OF SCALE POSITIONS.



"C" end of pitch-pipe gives this sound.

"Do" (or 1) in this position has the same sound "2" in the scale above. Sing from "C" down.

"1" in this position has the same sound as "5" in the first Ex.

which they will sing as when written in figures, except that the

position of the note on the staff will indicate its name. The scale may begin on any line or space, as, for instance, on the added line below in the above example ; or in the space below, first line, first space, second line, second space and third line ; the difference being that in each case (1 or Do) is a step higher, taking the same sound as is sung when the corresponding position is reached in singing the scale, beginning on the added line below. To get at this, sing down the scale in the above example, taking the sound made by the "C" end of the pitchpipe as 8, until the line or space which has 1 is reached, which sound, if called "Do," will be the correct sound in which to start the scale in its new position ; thus, if the scale begins on the second line, whatever the sound of 5, as started by the pitchpipe, will be the sound for 1 in the new position.

The same exercises which have been studied in numerals may now be put on the staff and sung by the school ; write them in the different scale positions and use the same intervals as have already been learned. These give ample work for the first four to six weeks of school and form the basis for future lessons. It must be remembered that in the beginning, patience and perseverance are the two things necessary, and that inclination to get tired because of the slow progress must be overcome. Do not crowd your pupils because the work is simple and to you, uninteresting. Haste is always purchased at the price of failure.

[Mr. Brown is in earnest in this subject of music in common schools. He will furnish any number of exercises or any explanation desired, to any one who will send him stamped envelope with his inquiries.]

HISTORY.

J. V. ZARTMAN, MARION.

Some good definitions have been given for history, and the five great phases of institutional life have been clearly set forth. In this article I shall only attempt to show how the five lines of growth may be reduced to three, and that in view of the three, a good definition for history may be made.

Man is so constituted socially that he ever feels a yearning and striving to be free—free from the restraint of those about him, free from his physical surroundings and free from himself.

This freedom from the restraint of his fellows that man seeks

continually and persistently, may be called civil freedom. This freedom he feels the need of because he is hedged and hampered by those about him until at times he is troubled and in despair. This restraint may be near or far off in time and place. It may come from his next door neighbor who throws tin cans into his yard, or it may come from financial scheming in Wall street, or from extensive land ownership. No matter when it comes or whence it comes, it is restraint just the same, and man feels the need of some kind of protection. To give the individual this freedom is the function of all government. The law prevents my neighbor from stoning my house or trespassing upon my property in any way. He is not allowed to do a thing on his own premises that in any way interferes with my well being. Roads are built and bridges are kept in repair that I may travel with safety and dispatch. The street is lighted that I may not fall into the gutter, and that thieves and robbers may be detected and punished. Gates must not swing over the sidewalk and the doors of public buildings must swing outward, because life and limb are endangered. Government makes a thousand provisions to the end that the individual may be free from the restraint of those about him. With these influences that affect the individual directly we are somewhat familiar, but when far off influences, working in and through the intricate machinery of this great government are encountered, the mind shrinks from an attempt at interpretation. Here is an argument for selecting men of profound learning to fill the places of trust under our constitution. Here is something that suggests that our legislators should more frequently retire to the mountain top where they may secure a broader view, and from which they may more clearly see the many complexities amid the great sea of humanity constituting this, the greatest republic of the world's history.

Again, we desire to be free from our physical surroundings. Ethics and philosophy are all right in their place, but the bread and butter side of life is, to many of us, a serious consideration. This struggle to "make ends meet" prevents thousands from making intellectual progress. No man ever achieved greatness as a scholar who was in bondage to his physical self. The man who must work at hard labor day after day, from early morn till the set of sun, cannot be more than a slave. House rent, gas and coal bills, and food and clothing for a family of six cannot be had at a

dollar and fifty cents a day and leave the humble toiler and his little ones in any condition other than slavery. Dark indeed must be the future of the thousands now in this kind of bondage. We are all, to a greater or less degree, under bondage to our physical selves, and there is not one among us who would not enjoy a larger degree of freedom in this respect. All true industrial progress assists the individual in his struggle for this freedom. Every wheel that turns, every lever that moves and every invention that was ever made should contribute to this end. If it is not so, then far better the wheels had never turned, the lever had never moved and the invention never been made.

Once more, the individual may have civil freedom and physical freedom and yet be the worst kind of a slave. Civil and physical freedom do not save one from bad temper, bad habits, selfishness, dishonesty and untruthfulness, but are simply conditions which promote them. In these things man seeks to free himself from himself. The struggle begins early. In school and at home the child shows selfish tendencies that must be overcome, and that teacher who induces the selfish child to divide the apple with his fellow has done much to assist him in his contest with himself. Society, too, must aid in the regeneration of the child. He must be reclaimed. His selfishness must be replaced by a spirit of generosity, and in this work of love the church must take a part. Bad temper is to any individual a curse that may wreck and ruin a life otherwise useful. The unbridled tongue, under the control of a bad temper, works much mischief in the world. It is the business of the school, the church and society to assist the unfortunate one in his effort to control a bad temper, for which he may or may not be responsible. Formulated my thought would appear as follows :

Freedom of the individual: 1. From the restraint of his fellows—Government. 2. From his physical self—Industry. 3. From himself—Church, School, Society.

Based upon this thought, history is a record of the struggle of the race toward freedom.

Teacher. "Robert, here is an example in subtraction. Seven boys went down to the creek to bathe, but two of them had been told not to go in the water. Now can you tell me how many went in?"

Robert. "Yes'm, seven."

PROGRESS IN HISTORY TEACHING.

C. A. M'MURRY.

History, as a common school study, illustrates well the topical form of study discussed in the previous article.

We are beginning to select a few important topics in American history and give them a fuller, richer treatment. The prevailing idea in our history work heretofore, has been to memorize the important facts of our national life. But history has a much greater value than to serve as a memory drill in storing up chronological tables.

Our national history is a wonderfully rich and interesting study of the lives and labors of remarkable people and of mighty struggles and progressive movements.

The study of our history in the proper way not only gives us a chance to cultivate real patriotism in a much stronger sense than we are now doing, but to admire, appreciate and emulate the fine qualities, the manly virtues that have appeared in the lives of such persons as Robert Morris, Alexander Hamilton, Roger Williams, Anne Hutchinson, William Penn, John Quincy Adams, Robertson of Tennessee, and a great many others. If strong and worthy character is the greatest aim in the education of children, let us give them a chance to know and feel the stimulus of our own honored representative men and women.

The history work thus far has been kept upon too low a level of simple information-getting. It will serve even this purpose by chiefly serving higher purposes. We may note here a few of the purposes which this study should serve.

1. To cultivate a strong sympathy and appreciation for the personal and moral qualities embodied in many of the best representative men of our own history. These stand out clearly as real and potent illustrations of civic virtue.

2. To gain sympathetic insight into the great struggles and developments through which our people have passed, for example, the early trials and success of the Puritans, the revolutionary struggle, the conquest of the Mississippi valley, the slavery conflict. These great questions are not only interesting and instructive, but large and many-sided, calling for judicious weighing of influences and forces at work, fair-mindedness in estimating arguments. It is by looking carefully into these old struggles and battles that we

are prepared better to estimate and decide our course in our present political and social struggles. The teaching of our history thus far has been more calculated to produce prejudice and one-sided thinking on political issues than impartial and independent thought. In this connection, it may be said that our history gives us first the materials of information, the facts with which better to understand our present political and social life; but more important still, the history of our past should be treated in such a way as to encourage the right attitude of mind, the judicial spirit for the treatment of our very difficult and complex problems to-day. We very greatly need more fair-minded, independent thinkers and the schools can help to furnish them.

3. First of all our *teachers* need to catch a full glimpse of this great double function of our historical life. They need first of all to see how rich and inspiring for themselves are these historical studies, how capable they are of exerting strong moral influences, and secondly, the mental balance and judgment, the willingness to learn and weigh the facts on both sides before passing judgment—all these qualities of right thinking need to be illustrated in the teachers if they are to appear in the pupils.

It may seem that the first and still more the second of these aims is too difficult of attainment for the children of our schools. But a deeper and closer examination of the situation will show that they will both contribute to a more interesting and stimulating study of history.

We are all coming to believe that biography is the best form of history for fourth, fifth, and sixth grades and it ought to occupy a large place all through the latter course. It has the very kind of interest (personal and concrete) which has been so sadly lacking in our short, outline histories. Young people are always interested in the stories of individuals.

The second point may be more difficult to illustrate and prove. It seems to me that a seventh or eighth grade class will be seized with a much stronger interest for history and respect for its teachings, if they are not taught dogmatically the facts and conclusions, but are held to a rational study of problems, an inquiry into causes, an effort to balance arguments and estimate the relative importance of ideas and events. This is genuine study and has all the advantage of self-activity and thoughtfulness.

In the study of the Mexican war or of the war of 1812, there is

a good offer of the kind of materials for reflective study. In balancing political parties and leaders, as Hamilton and Jefferson, Webster and Calhoun, the offer of deliberate judgment, after careful gathering and comparison of facts, is made.

In concluding this short article we may say, that there is abundant evidence that our own national history is one of the studies which is destined, (when the best materials and methods are found out,) to greatly enrich our school course and through it and the teachers, the lives of the children.

DEPARTMENT OF PEDAGOGY.

Conducted by **ARNOLD TOMPKINS**, Chair of Pedagogy, University of Illinois, at Champaign.]

HOW TO CULTIVATE THE MEMORY.

The following paragraph from W. T. Harris, in his discussion of Hegel's Logic, is a text for sermons in pedagogy. He has been speaking of how the soul ascends towards the higher activity of pure thought.

"Thus in ascending above sense-perception and memory the soul dispenses with their activity, having more adequate forms of knowing; through disuse these faculties dwindle and finally perish. Insight is better than memory. To see a causal principle is better than to be obliged to retain all the details that follow as its results."

How to cultivate the memory so that it may retain the details of knowledge has always been a serious problem with the teacher. To this end much ingenuity has been spent in devising mechanical drills to fix the facts of a subject in memory. Repetition, repetition, repetition has been the watchword; often resulting in the efforts to fix the forms of knowledge rather than the facts. If the time spent on such mechanical drill were spent in giving the insight spoken of above, the power to hold facts would be almost infinitely increased. The foregoing statement hints that economy of memory, rather than its cultivation, is the important matter, or rather, such economy is the true cultivation of memory. As things are held together in the objective world so they must be held together in mind; and that is by some causative principle. If the teacher wishes to cultivate the memory and

cause the pupil to hold the facts of the subject it is a great mistake to drill for the mere repetition of the facts. The memory is best cultivated not by thinking of it, but by striving to give the mind an inherent grasp of the subject. This follows from the fact that the memory is not a separate faculty; but rather a tendency of the mind to act as it has acted, whether it be in the form of sense-perception, imagination, reason, emotion, or volition. The full action of whatever faculties are necessary to grasp the subject firmly is the only law for remembering anything. The best thing to do is to forget, in teaching a given point, that the child has a memory, and develop an innermost knowledge of the object under consideration. To teach a pupil so that he may remember anything is simply to teach him so that he may know it. Whatever repetition may seem to be required for the sake of memory is a repetition of the various processes of thought for the purpose of a closer knowledge of the subject.

But the particular form of knowing which assures the reproduction of the details of knowledge is that given above by Dr. Harris. It is that of grasping the diversity of things into the unity of a generative principle. His statement must not be taken as a remote theory but as an immediately practical guide in the process of every lesson and in the larger process of the subject as a whole. A pupil properly taught in grammar can reconstruct his subject from the central principle which the teacher has made the pupil's guide in the learning of the subject. In a sense a pupil ought not remember the definitions, but should be able to reconstruct them from a guiding principle when occasion requires. A merely memorized definition can have no purpose whatever. But to give the mind the power of reconstruction from a central principle, so that it may readily adjust itself to the varying requirements of life and thought, is the very gist of an education. Neither should a pupil memorize outlines of a subject, hoping thereby to hold the elements by substituting mechanical connection for a causal principle.

One may so learn rhetoric that he can, without the aid of external memory, and whenever occasion requires, run down all the details of the subject, even to the minutest points of style. Ability to recall is in proportion to the inner coherency in thinking the subject. Thus, again, to teach a subject so that it may be remembered is to teach it so that it may be known according

to its inner constitution. The effort to drill the mind to hold things mechanically in the form of statements, definitions, and outlines usually arises from laziness, which seeks to know things without exercising the legitimate processes of knowing. And, as in all cases of laziness, the effort to shun legitimate labor is greater than that required to do the work properly.

METHODS IN TEACHING READING.

The letter method, the phonic method, the word method, the sentence method—which is the proper method of teaching reading? Each in turn has had its advocates, and teachers have shifted about from one to the other hoping to find in one or the other the child's royal road in learning to read. The Pollard method, the most ingenious of phonic methods, has been adopted by school boards here and there; thus giving the assurance of legal sanction that that method contains the secret of success. Recently the training department, after failing to find complete satisfaction in any of the other methods, thought surely that we must have the eureka at last in the new Pollard method, and hence adopted it straightway.

All this is only a part of our general superstition in education, namely, that there must be some specific, labelled, formal process of teaching a subject; that method is something to be adopted and applied to the teaching of a subject, rather than the inherent movement of the subject itself.

The restless shifting about in these various methods indicates that no one of them contains the secret desired; besides, a close analysis of each of the processes shows that each is partial, that each breaks down at some point and calls to its relief some or all of the other processes. No one ever taught reading by the letter method, as he may have supposed he was doing at the time. The letters were taught and then put on the shelf to wait the teaching of words as wholes. Then the letters were taken up and put into the words which explained them. There is no way to cross over from letters to reading. Thus, too, with the phonic method; the powers of the letters are taught, but neither these sounds nor their combinations can give meaning back of symbols. No one ever taught reading by the Pollard method. One can make a good start with the word method, but it soon reveals its limit, and re-

course must be had to letters and sounds and sentences. The sentence method can not move far without the aid of all the other methods.

Why do we not understand, therefore, that all these so-called methods of teaching reading are only phases of the method of teaching that subject? The method of teaching reading is quite complex, and the recognition of this complexity would enable us to use intelligently all the phases of the process, rather than to be straining to make some phase of the process do the work for the whole. How much waste is there always when a teacher becomes an advocate of a method? When a teacher starts out in a subject sworn to do such good things as to correlate and concentrate, there may be expected much waste through unnatural straining to carry out a method. The advocacy of specific methods belongs to the childhood of the profession, and in maturity it appears, now and then, in those who have not put away childish things. We ought to be able to keep our heads in the complex details of a single process; and the teacher of reading should move steadily forward by the co-operation of all the ways and means at his command.

While seeming here to insist on the use of various methods of teaching reading, it should be insisted on still more earnestly that all the methods should be seen as the movements in one method; or the whole should be seen as one process, one method. Partial methods are clung to because of a failure to grasp the whole movement. The reading method is a unity of the whole, and is more than the letter method, the word method or any other of the so-called methods. It is rather a discourse method. The child's central impulse is all the time a discourse method.

The child speaks and interprets language under the impulse of the effect to be produced. A child does not learn to speak through a consciousness of letters or sounds, or even words or sentences. The child is not conscious of a word or sentence as such; but of these as discourse. Every word or sentence the child utters is to it a discourse. To it, the thing and the word, the sentence and the thought are one whole of life and action. The rapid progress of the child in learning language during the first few years of its life is due to the fact that it is moved to utterance and speaks for effect. To him sounds and words and sentences are discourses—language and thought moving in vital unity to produce some

experience. There is something that may be fairly called a discourse method which is inclusive of all the others—or rather is the moving force back of them.

The success of a teacher of reading depends on the extent to which he utilizes the discourse impulse in the process. A pupil must learn letters, sounds, words and sentences through the feeling of limitation of his own discourse energy. This is quite well understood now by leading primary teachers; and the pupil is not made to feel that he is learning to read, but that he is learning other things about which he desires to express himself and for which he interprets the expression of others. Over-consciousness of method frequently stands in the way of the teacher of primary reading. The whole thing depends on the quantity of interpretation done by the pupil under the discourse impulse. Nothing but experience with language forms, under the pressure of the message which prompts the language, can ever give the pupil facility in the interpretation and the expression of thought, can ever secure facility in reading. The pupil learns to read by reading, and that from the very outset and not by first learning some letters, sounds and words. We sometimes speak of preparing a pupil to read by supplying him with a stock of words; but he cannot learn words except in constructing or interpreting discourse. Let the teacher, therefore, move the pupil under the discourse impulse, and by experience and incidentally, using all the so-called methods of teaching reading, bring him to a knowledge of letters, sounds, words and whatever else is required by the process as a whole.

Much reading under the proper impulse is the key to the situation.

THE FATHERS OF CHILD STUDY.

The following phrases are in a paper read before a Round Table on Child Study.

"Since this science (child-study) has found its way from the few giant minds to the teachers, and from the teachers to the mothers," etc.

"Heretofore, the teacher has generally been alone in his efforts in the direction of child-study and its practical applications." etc.

The giant minds who read papers before round tables seem to

forget that the mothers are the fathers of child-study, that the mothers have since motherhood been pursuing child-study in the true scientific spirit of observation and generalization based upon the facts observed. The larger part of the deliverances of the giant minds—usually childless men—were already quite familiar to mothers. One of the great apostles in child-study recently announced, with due solemnity, that by experimenting on children he had learned that they liked bright colors. By a long course of experimenting in Germany and on the Pacific coast, the conclusion has been reached that children are most interested in the use and action of things—what things can do. Has not that been universally accepted since Adam? The child is action, and to it everything else is action. Action is its category of life and thought. What is new to the discoverer is not necessarily new to the world.

A bishop who studied astronomy late in life and discovered some of the immensities and mysteries of the universe hastened to deliver his newly found wonder in a lecture on astronomy to a body of college students, who responded only with "chestnuts." The man who has become a giant mind without having given much attention to children and who begins at once to study them is apt to feel the newness of old and accepted things and in the name of science deliver to teachers and mothers what is already an accepted commonplace.

PRIMARY DEPARTMENT.

Edited by MRS. SARAH E. TARNEY-CAMPBELL, Supervisor of Instruction in the
Anderson Schools.

LETTERS IN GEOGRAPHY.

Reality is one of the great elements in all school work. When the little people are taught the table of liquid measure, they have before them the gill, pint, quart and gallon measures and by actual experiment see the number of gills in a pint, of pints in a quart, and quarts in a gallon. Number work means very little unless the child makes with objects the combinations he learns. In geography work it is urged, again and again, that the only true basis lies in the intelligent observation of the home phenomena; and history, not to be out done, says the child should learn to

look first in his own particular community, and that there he will find all the essentials of the complex life of any people.

It was with this idea in mind in the geography work, that Miss Sarah E. Scott of the Terre Haute city schools planned one particular part of the geography work. It was a fourth grade and the class was doing special work on the British Isles. Miss Scott obtained the name of the superintendent of the schools in Glasgow, Scotland, and wrote him concerning the exchange of letters between her room and a corresponding grade in his city. Arrangements were perfected and Miss Scott's pupils wrote letters on different phases of Terre Haute, Indiana and United States life and received in return letters on similar topics from a number of Glasgow children.

The children made a careful study of Terre Haute, its arrangement, public buildings, parks, and government. They also studied the geography of Indiana, its animal, plant and mineral resources, and gained a general notion of the government of the United States. Then they selected points to write about. The Scotch children selected letters to answer and described some phase of their own life.

Two of the letters are herewith given and it is worth while to remark that the letters are printed just as written by the children. This gives a little idea of the ability of these children to use good English. The letters all have the marks of originality; no two consider the same points, nor tell things in the same way. There are two points, however, on which they seem to agree. One is, that Scotland is one of the most important countries in the world and the other, that in case of war between Great Britain and the United States, the latter country would, indeed, cut a very insignificant and sorry figure.

The letters are given just as written which explains the spelling of certain words and the lack of paragraphing especially in the first letter.

JOHN ST. PUBLIC SCHOOL,
GLASGOW, 13TH MAY, 1896.

Dear American Friend:—

I live in Glasgow the most important commercial town in Scotland. The school which I attend here is a large two story building with a similar one a little apart. There are twenty-three rooms in all. When we have any time to play we usually play

at ball or skipping rope. The smaller children play at rings or hide-and-seek. As for our flowers and trees they seem to be just the same as yours. We have picnics and excursions here in summer too. We usually start early in the morning and come home about nine or ten o'clock in the evening. In winter, we have parties and balls, which are very nice but skating is enjoyed quite as much. When the snow is clean, we make snow-balls to throw at each other or at a snow man which we have made. The trains here go at the same rate as they do in your country but some of ours can go over eighty miles an hour. At the holidays some of the trains have two engines, being so crowded that one engine could not draw them. We have geography, history, reading, writing, arithmetic and French in our class. We begin our history in the reign of Robert the Bruce and end with our present Queen Victoria. As we cannot have all her reign, we take up to 1887 which was the year of her Jubilee. Both the schools and churches here are very large as we have a great population in this vast city. Our country is not very large but it is the most important one in the whole world. The government here is carried on by two Houses of Parliament: the House of Commons and the House of Lords. The House of Commons is a body of men elected by the people who vote for them at the election. The House of Lords is composed of men who are there by birth and some of whom can reckon their ancestors back for hundreds of years. Every bill must be carried through both Houses and signed by Queen Victoria before it becomes law. The most important offices in the government are as follows: Prime Minister, Chancellor of the Exchequer, Foreign Secretary for Ireland and Home Secretary. I think I will close my letter now.

From your Scotch Friend,

MARY DUFF.

194 MAIN ST., BRIDGETON, GLASGOW,

14-5-'96.

Dear Friend Across the Herring Pond:—

If you should wish to improve yourself in city government, get Cleveland to send some men over here to take a lesson from us, for the Glasgow corporation is the finest in the British Isles, the U. S., or I would naturally suppose anywhere else.

The Glasgow corporation is formed by the leading men of Glas-

gow. The city is divided into several wards and each ward sends 3 members. Under the corporation are the following:

TRAMWAYS.—Stud of horses 1300, Cars 450, Drivers 350, Conductors 350, Grooms, etc. 500, Office clerks (clerks) and attendants 60. J. Young, General Manager. We are starting electric cars.

SANITARY.—This department is at present purifying the Clyde. The human refuse instead of going into the Clyde now goes into a sewerage work, where after the different processes are passed the one is discharged as manure into an outlying field, and the other into the Clyde as the purest water obtainable. This is costing many thousand £s. Any mill now discharging its back water into the Clyde is very heavily fined. The streets are continually being cleaned and are well looked after; but the pathways are dreadfully neglected, the only fault to be found with management of the corporation.

ROAD MENDING AND REPAIRING.—They have a very fine stock of implements for this branch and employ 4000 men.

BOTANIC GARDENS.—This is a beautifully kept park in which an ardent lover of horticulture could spend a day, week, or month without tiring. It is kept in exquisite order; it contains five or six large conservatories, plats of trees and flower beds without end. A military band plays several days in the week in the summer seasons.

QUEEN'S PARK.—A large park for the public to stroll in, sit, read and enjoy themselves in any quiet method.

SATURDAY CONCERTS.—These are given in the City Hall which holds 7000 and is generally packed. The corporation pay the finest singers and performers to sing and perform and for the tiny sum of 3 pence in the afternoon and 6 pence in the evening the public hear the finest talent in the world.

The profit is distributed among the hospitals and the Royal Infirmary. Lord Provost Bell, the head of the corporation, is one of the most ardent supporters of any scheme to raise the standard of the city and in himself is a most courteous gentleman.

The general elections are carried on very differently here to what they are in America; at least I believe so. Certainly there is great excitement which often breaks out in brawls. Now take for instance the last election only a few months ago. The result was as you know the Tories came into power. Now because a

Liberal was Post Master of some small place he would have been turned off and a Tory put in his place in America; not so here, if the man had no fault he remained on, whatever party was in power. This is an instance of what we call justice.

Your system is the same as ours used to be concerning the Catholics before the Roman Catholic Emancipation Bill was passed 1829.

I will now have a little talk about that Venezuelan affair. If we were in trouble, or, rather necessity, you as a nation would be the first we would apply to for advice. But we brooke no interfearance (interference) from any one. We did not ask your advice about Venezuela. We were quite as competent to decide the question as you, if not better, seeing it was our quarrel not yours.

Our wish is to remain friendly but if you will not let us, well you will have to take the consequences and I hope that the millions you lost at the mere rumor of war with us will be a lesson to you and you have noticed our losses were trivial.

I remain yours sincerely, a loyal British boy and a friend of the Americans.

SIDNEY LITTLEWOOD.

NUMBER.

One of the greatest defects in our number work consists in the great amount of manipulating figures without insisting that the children see a definite picture back of those figures. A man who had spent several years in the study of this subject adapting it to the needs and capacities of the children, said the best thing to give the child on his first day in school as a "start" in his number is a foot ruler, and for the very first lesson and lessons put the children to measuring lines on the board, desks, strings, windows, etc.

There are many of us who know the table for linear measure, but cannot tell by looking at an object what its dimensions are. We are very inaccurate in estimating the length of a room, of a yard, the height of a building, the square feet, square yards in the ceiling or walls of a room. When we wish to know cost of plastering, for instance, we try to remember the rule. We do the same thing when trying to find the area of a piece of ground. But we do not try to form a definite picture of just what we wish

to find. We remember we learned once that feet multiplied by feet gives square feet ; square feet multiplied by feet gives cubic feet ; yards multiplied by yards gives square yards ; square yards multiplied by yards gives cubic yards. Then he asks, " Eggs multiplied by eggs gives what? Square eggs? Square eggs multiplied by eggs gives——?"

Teach measurement of lines and surfaces from the first. In the surface, start with a unit, an inch for instance, and show the children a little square one inch each way and tell them it is called one square inch. Then put two such squares together, then three, and four and have the child see each time the unit, one square inch, then the number of such units—three square inches, four square inches. The fact is, we don't multiply inches by inches and get square inches ; but the unit is a square inch in this case, and it is simply that a surface is made up of a number of square inches in a row and there is a certain number of rows.

This teacher also condemns the teaching of least common multiple and greatest common divisor as distinct subjects. He insists that the place to teach these is in connection with fractions where the child sees the necessity of something to put the fractions in shape so he can handle them.

He also insists the primary number be with objects which the child himself can manage. The children mark in some place on the wall how tall Mary is. They also mark the height of Jane and find out how much taller one is than the other. Buds and leaves are counted. How many more here than there? What part of them have I laid on the table? etc.

It is the plea that so many thoughtful teachers are urging—make the work actual work—something in the everyday life of the child and put in such a way that he can image the exact process he employs.

A pleasant look hath she,
Such as the children love to see upon
Their mother's face when they her smile have won:
Let others choose their love—
September pleases me.

—*Thomas MacKellar.*

LEND A HAND.

[This department is conducted by MRS. E. E. OLCOTT.]

“Look up and not down
Look forward and not back
Look out and not in;
Lend a hand.”

DRILL.

What in the school room is drill?

“It is drudgery,” says one.

“It is a necessary evil,” says another.

“The bane of school work,” from a third.

“The favorite tool of a machine teacher,” from a fourth.

In such ill-favor is it that one feels an inclination to apologize for “practice work” and longs for an ideal school in which every lesson is something new. Is drilling a natural method—Nature’s way of teaching? An old, old, old psychology says: “Line upon line, precept upon precept” and modern psychologies give among the laws of memory—*repetition*.

In the unrestrained life of children, do we always find them playing something new, or playing the old games over and over again? How many teachers have found it difficult to introduce new games? The children enter into them with eager curiosity for a time, then interest flags, and soon the playground knows them no more, while the old games which their parents and grandparents played, changed only with the seasons.

Have you told stories to young children? Do you know what it is to bring a tale to a thrilling close and then hear the eager request, “Tell it again”? Pleased with the compliment you repeat the story a second, perhaps even a third time, but if it is especially fascinating, you are at length fain to beg to be excused till “another day.” Grown wise by experience, you may, when the story hour comes, preface favorites with “I can tell this but twice” though you may yield to a persuasive “Just *free* times, please.”

Has it been your lot with a bright colored Mother Goose book before you to repeat

“Little Miss Muffet
Sat on a tuffet,” etc.,

ten times in succession before an imperious little finger pointed to another rhyme? If so, have you wondered what was the lesson

that Nature meant you to learn? We blunder so, and are oftentimes so stupid, we who should learn of children in the concrete instead of the abstract; who should understand books through children instead of children through books.

May not "Tell it again" which comes with the very young more frequently than "Tell another story," be Nature's finger pointing to repetition as a law of acquisition?

By and by, the words will be woven into the thoughts and vocabulary of the child, the attention is trained and retention is strengthened.

"Where is your mamma?" asked a visitor of a three-year-old boy. "Down 'pon the Swawnee river," he replied at random, the words of the song ringing in his memory; he really did not know where she was.

"Woe be to Sally, she has removed her neighbor's landmarks," said a youthful Macaulay, when a servant carelessly swept away the shells with which he had outlined his play-ground. With each child familiar words creep into the speech.

Coming closer to the school, have you noticed the pleasure with which children review favorite lessons to appreciative parents or friends?

"Let's have an adding match, uncle; I'll bet I can go up a long column 'most as fast as you!" The challenge was accepted and uncle was put upon his mettle to keep up in the race, to the keen delight of the boy. "Oh we practice, I tell you, we can go up the figures like squirrels!" he exclaimed gleefully, revealing the judicious drill to which in large measure he owed his expertness.

"Would you like to hear me read?" asked a little girl naively. "Certainly," I replied sincerely. Whereupon she brought, not a story book but her third reader and with genuine enjoyment read lesson after lesson. One especial favorite she read three times, while I listened with unaffected interest, for I was studying her, and longing to catch the secret that would enable me to lead a class to practice on lessons with that zest.

"An attentive listener," thought I, "is one element, and individual effort another, that inspires her. If we were in school, she and I, and I was listening with half an ear, or some other pupil was reading that lesson, she would probably be listless and inat-

tentive. Therefore, teacher, an appreciative listener, small number in review class, are points to be noted."

I do not wish to seem to favor reading the lessons in a reading book over and over and over, to master them. It is better to read six lessons containing nearly the same words but conveying new thoughts, than it is to read one lesson six times. But after the six lessons have been read, the pupils will enjoy occasionally reviewing them. With beginners it is hearing others make the number stories, spell the words or read the lesson that brings weariness. If he, himself, could recite most of the time, he would be elated.

Spirited drill is not distasteful to pupils. Wisely used, they come from it with eyes as bright as from a science lesson.

Then let us accept drill, repetition, as an important factor in teaching, and spend time and thought in making it attractive and effective. Let us endeavor to set it above drudgery, and bring it close to the spontaneous repetition of unrestrained child-activity.

DESKWORK—PUZZLES AGAIN.

Drop-letter puzzles are made by simply omitting the alternate letters in words indicating the omission by a dash. The answers are found by supplying the proper letters.

A little help from the teacher will enable the pupils to enjoy making the puzzles quite as much as answering them.

Here are some suggestive ones:

I. Of what are the following the capitals?

- | | | |
|------------|----------------|------------|
| 1. -o-t-n. | 3. -a-h-n-t-n. | 5. -e-n-. |
| 2. L-n-o-. | 4. -a-i-. | 6. -i-n-a. |

II. From what states do the following products come? But one state for each.

- | | | |
|-------------|-------------|-----------|
| 1. -r-n-e-. | 3. -o-a-c-. | 5. -u-a-. |
| 2. h-m-. | 4. r-c-. | 6. c-a-. |

III. Where are the following famous rivers?

- | | | |
|------------|-----------------|------------|
| 1. -i-e. | 3. -i-s-s-i-p-. | 5. D-n-b-. |
| 2. G-n-e-. | 4. A-a-o-. | 6. -h-n-. |

IV. In what zones are the following animals found?

- | | | |
|----------|---------------|-------------|
| 1. -i-n. | 3. -o-a-b-a-. | 5. b-s-n. |
| 2. s-a-. | 4. t-g-r. | 6. -n-e-o-e |

V. Quite young pupils can solve the following.

Clothes a little girl wears:

- | | | |
|-----------|---------------|-----------|
| 1. d-e-s. | 3. -h-e-. | 5. -a-. |
| 2. -p-o-. | 4. s-o-k-n-s. | 6. c-o-k. |

VI. The history class may utilize drop-letter puzzles as indicated by the following from the Sunday School Advocate:

Locate the following battle fields—Civil War.

- | | | |
|----------------|-------------|--------------------|
| 1. B-l-R-n. | 3. S-i-o-. | 5. F-e-e-i-k-b-r-. |
| 2. G-t-y-b-r-. | 4. C-r-n-h. | 6. W-n-h-s-e-. |

Answers.

I.

- | | |
|----------------------|-----------------------|
| 1. Boston, Mass. | 4. Paris, France. |
| 2. London, Eng. | 5. Berne Switzerland. |
| 3. Washington, U. S. | 6. Vienna, Austria. |

II.

- | | |
|------------------|----------------|
| 1. oranges, Fla. | 4. rice, S. C. |
| 2. hemp, Ky. | 5. sugar, La. |
| 3. tobacco, Va. | 6. coal, Penn. |

III.

- | | |
|-----------------|------------|
| 1. Nile, | 4. Amazon, |
| 2. Ganges, | 5. Danube, |
| 3. Mississippi, | 6. Rhine. |

The pupil may give the source, course, etc., of each river, or indicate merely the principal country through which it flows, as the teacher prefers.

IV.

- | | |
|-----------------------------|---------------------------|
| 1. Lion, tropic zone. | 4. Tiger, tropic zone |
| 2. Seal, arctic zone. | 5. Bison, N. temperate. |
| 3. Polar bear, arctic zone. | 6. Antelope, N. and S. T. |

V.

- | | | |
|----------|--------------|-----------|
| 1. dress | 3. shoes | 5. hat |
| 2. apron | 4. stockings | 6. cloak. |

VI.

- | | |
|---------------|-------------------|
| 1. Bull Run | 4. Corinth |
| 2. Gettysburg | 5. Fredericksburg |
| 3. Shiloh | 6. Winchester. |

They may be located more or less exactly as teacher directs.

Divide the class into two or more sections. Each section may be assigned a different question or all may use the same. To

illustrate the latter, the teacher may write on the board: "Name and locate the capitals of ten countries of Europe."

Each pupil, without consulting a geography, selects any ten European countries, forms a drop-letter puzzle with their names, writes the puzzle neatly on a large sheet of paper, and signs his name.

At a signal the sections exchange puzzles, and each pupil bends his energies to solving the one he receives. He has, of course, to supply the missing letters to discover the ten countries, and then name and locate the capitals. He writes the answer neatly beneath the puzzle, and signs his name.

The puzzles are then returned to their authors, and all are finally handed to the teacher for inspection.

Notice that the puzzles require double the amount of thinking that a simple question would, for instance in 1, the mind has to recall many cities and compare them with the skeleton names to discover which one is meant, and then has to remember of what country it is the capital. Because it is put in the light of a puzzle, a recreation, the pupil thinks with a zest that is often absent when merely giving the capitals of countries.

PSYCHOLOGY VIA DORA AND DAN.

"Stop, little daughter; you mustn't do that," said mamma, as she opened the door and saw Dora offer Dan a bit of cracker and then quickly draw it away. The fox-terrier looked anxiously at the cracker, and at each fresh disappointment an expression of regret would come into his pathetic eyes, to be at once followed by anticipation, as he would try again; but Dora was quick, and so far doggy was eager, and the little one amused, when mamma interrupted.

"Why not?" asked the golden-haired six-year-old; "it is fun for him." "Give him the cracker darling," replied mamma, "and then come sit in my lap while I tell you." "But I want it mamma," persisted Dora. "Put it on the table and let's see what's best." And then mamma drew the little girl into her arms and quieted the dog, now barking noisily, as he saw his hoped-for cracker lying out of reach.

"In here," stroking the fair head, "is a house with a lot of little rooms, oh very many, and little thought people live in them.

Each one is for a different kind of people, and the name is on the outside of the door; one room is honest room; another, good room; and another, kind room. On the other side of the house is deceiving room, disobedient room, and ever so many more than I can tell you of now. When a room has a little thought-girl living in it friends come to stay with her, so she won't feel lonely, and they live together."

"But, mamma," said the eager-listening child, "doesn't the room get full, and don't they fight?"

"In the same room the little people think alike, so they don't fight; but the room gets full, and when too small grows larger and larger to hold them all."

"Does every room have somebody in it?" asked Dora.

"No," said mamma; "the house is yours, and only the little people get in that you allow. The rooms are all there, but you can keep some of them empty and fill others very full; whenever you let any little thought-girl into a room it is very hard to keep her friends from coming to stay with her. Now, dear, when you pretended to give Dan the cracker and meant to eat it yourself, you let a little thought-girl push right into deceiving room, and before you knew it a friend would be there; they might give a party to lots of friends, and the room would grow bigger and bigger, until there was hardly any space left for honest room on the other side of the hall."

Dora thought a moment, then asked, "Has Dan a little hotel in his head, too?"

"Yes, but not quite like yours; he doesn't know how to keep naughty people out, because he doesn't think, as you do; when he lets good thought-people in his house, it's because he is afraid of a whipping or wants a pat."

"If Dan doesn't think, why can't I deceive him?"

"You can, dear, but you open the door of deceiving room; and, just think, it is so easy to open the door of honest room instead. Besides, in honest room the little thought-girls are very happy and jolly; they are not a bit afraid of people cheating them; while in deceiving room they are quiet and gloomy, for they must think of fibs all the time they play."

"Oh, quick, mamma, let me go give Dan the cracker before that sly thought-girl gets up-stairs in my hotel."—*Gerson Haven, N. E. Journal of Education.*

EDITORIAL.

THE TEACHERLY LIFE.

The term used in the title is not yet found in the dictionary, but it is a form that expresses what no other word does and so is unhesitatingly employed. The life of a teacher is really a part of his work; there are those who are physicians, soldiers even from the high standpoint of thus serving their Creator and their fellow-men the best. The life of the teacher must be the reflection of the Life of the Great Teacher; he must have his spirit; true this is not demanded by the state which grants him a certificate of fitness. But the greater his resemblance to the Great Teacher in the spirit the more certain he will be of that large success for which the true laborer hungers. The foundation of a teacherly life must be laid far deeper than on a shallow knowledge of arithmetic, geography, grammar and history; he must feel that he is working in behalf of his Creator, along with his Creator. It is right for him to gain knowledge, in fact, wholly wrong to undertake his work without it, but his claim is more deeply founded. He is aiming at a higher state for his pupils. He would put their feet on firmer and nobler ground, not simply have them know mere facts. There is narrow teaching and there is also broad teaching and high teaching. These come from the life of the teacher. One who has profound attainments may teach very narrowly; one who has moderate scholarship may teach broadly and bountifully.

Among the elements of the teacherly life are sympathy, sincerity and recognition of responsibility and spiritual aims in the application of truth. The moneyed recompense must be put out of sight; the good of the human being sought. The higher the teaching the higher does the pupil rise above his animal self, and the more does he strive to go beyond his past attainments. When there is evil in a school or college it is because the teaching is of a low order; and yet intense thoroughness may have been aimed at. The aim of true pedagogy is to arouse the teacher to found his work on life.—*N. Y. School Journal.*

ARBOR DAY.

Friday, Oct. 30, has been set apart by Supt. Geeting as Arbor Day. In his Township Outlines Mr. Geeting makes suggestions for the proper observance of the day and furnishes an excellent program. We hope the result may be what Mr. Geeting prophesies—that 50,000 or more shade trees with many shrubs and vines will be added to the number that already ornament our school grounds.

The celebration of Arbor Day in our country began in treeless Nebraska in 1872. Ex-Gov. J. Sterling Morton, who is now serving as secretary of agriculture, is father of the thought. His efforts were not however, directed to school premises but to the vast treeless plains of his state. So remarkable have been the results in Nebraska, (it is estimated that over 800,000,000 Arbor Day trees have been planted) that the originator of this movement is recognized as a great benefactor of his state.

Since 1872, state after state has fallen in Nebraska's lead, till the practice

has grown to be an American Institution. In 1882, Arbor Day assumed a new character and acquired a wider interest with the people as it became connected in its observance with the public schools. This it did for the first time, during the sessions of a national forestry association held at Cincinnati, O. On the observance of this day the children of Cincinnati, under the direction of Supt. John B. Peaslee, celebrated it by planting memorial trees and dedicating them to authors, statesmen and distinguished citizens. Teachers have nearly two months to work up this Arbor Day celebration. We would suggest that a little time be spent each day in getting ready for it. Find how much or how little your pupils know about trees. Secure an expression about the trees they would like to plant. Tell them stories and read poems about trees. Above all, try to impress upon the youthful mind that "He who plants a tree, or a bush or a flower works with God to beautify the garden of the world."

THE USE OF COMMENTARIES.

Just at present there seems to be a tendency toward furnishing the teacher too many helps. Everything is outlined—all the main points are noted—the best form of analysis is suggested. In short, every thing is done for the teacher that can be done to relieve him of thinking and planning for himself. These helps are all right *provided* they are used, not abused.

Let these remarks apply to the Teachers' Reading Circle work. If the teacher wishes to get most good out of this work he should read for himself. If the teacher will take each selection and each subject and read it carefully two or three times and make out of it all that he can for himself and read the commentaries and outlines by some one else, afterward, he will get great good out of the study and the helps will strengthen his own work; but if he reverses this order and reads the outline first, the chief benefit is lost. This course has a tendency to destroy originality and make teachers dependent.

The "introduction" to a book should always be read *last*, if the reader desires to do any original thinking. One must solve his own problems if he wishes to derive any benefit from the study of mathematics. In the study of Shakespeare's plays, the literary selections in the Reading Circle course for this year, or any similar work, do the original work first and use the helps later.

THE NEW TEACHER.

In a few weeks, thousands of teachers will go into new schools. To such a few words of suggestion may not be out of place. As every teacher has his own personality it is not likely that the incoming teacher will find everything to his own liking and it will be necessary to make changes. The suggestion is that these changes be made gradually and when they are made, let it be done if possible without any reflection on the preceding teacher.

Occasionally a teacher is found who thinks that he must make an impression by finding fault with everything he meets and making as many changes as possible. Good taste as well as good morals will justify the statement

that the absent teacher should be treated with as much courtesy as if he were present.

Let the new teacher first inform himself as to what the existing conditions are and then let him make any necessary changes gradually. Professional courtesy suggests the golden rule. What is true of the teacher applies with still more force to the superintendent.

REVIEWS.

Every experienced teacher knows the value of reviews. It matters not how clear a point may be made the first time it is met, if it be not fixed by repetition it is soon forgotten. Many a teacher who has faithfully taught a certain subject and made every step clear as the class advanced, has been astounded at the failures in examination. Daily reviews are essential and a frequent recurrence to important principles cannot be over-estimated.

The special purpose of this writing is not so much to urge the importance of reviews as it is to call attention to the *kind* of reviews. If the review is simply a review of the old lesson in the old form, of course it will lack freshness and interest. As a rule, a review should be a review of principles and not a repetition of an old lesson. When the old principle is presented in a new form, it has the freshness and interest of a new lesson. Of course, certain things must be repeated in form and fixed, but as a rule reviews should be conducted by means of *new matter*. In this way the review will require as much thinking on the part of the child as does the advance lesson and the interest is kept up all the way through.

HOW TO BEGIN.

The first days of school are always very trying to children. After a long summer vacation they find it difficult to suddenly stop their active out-door life and fall into the school routine. In a great many cities it is customary to lighten the work at the close of the school year when the weather grows warm. This is wise, but it is still more necessary to begin work gradually. For the first week or two the work should be made light and the recesses should be extended. Such a course would conserve the health of both teachers and pupils.

PRESIDENT JOSEPH'S CRITICISM.

To the Editor of the Journal:—President Joseph, of the Central Normal College, in his article in the August number of the JOURNAL uses this expression: "When one of our leading officers ordered the superintendents of the state to give licenses to each of ninety-five would-be teachers of the state, he wronged 15,000 tried teachers who had earned their laurels; and strange to say, only a few superintendents had the courage to resist the outrage."

The officer referred to is the state superintendent and the ninety-five

"would-be teachers" referred to compose the class that graduated from the state normal school last June.

In this statement, Mr. Joseph does a wrong to the state superintendent, to the great majority of the county superintendents, to ninety-five graduates and above all to himself.

To begin with, the state superintendent never made any such "order." It is true that, in answer to a letter of inquiry, Mr. Geeting gave it as his opinion that the county superintendent had the discretionary power to grant licenses without examination to the class of persons referred to. It is also true that he repeated this opinion in answer to a question in the county superintendent's convention in June.

This "opinion" which is not an "order" and not binding on any one, is in accordance with the practice of many county superintendents for years. It is not contrary to the law but in perfect harmony with its spirit.

The law provides that persons who complete the course of study at the State Normal must go out to teach successfully two years before they can get their diplomas, which exempt the holders from examinations.

Since the law was made, the requirements for graduation from the State Normal have been materially raised. Among the added requirements is this: a person must hold a two-years' license before he can get his certificate of graduation. The county superintendents have a rule that they will not give a license for more than one year to an inexperienced teacher. This means that a person before graduating must first be examined and secure a certificate and then teach, and then be examined again and secure a two-years' license and all this in addition to completing the extended course of study.

The law evidently anticipated that young people might complete the course of study required and go out from the school without having had any actual experience and so the granting of diplomas was postponed till the experience could be had. Now that the experience is required in advance and that more professional work is required than anticipated, it is clear to every unprejudiced mind that the *spirit* of the law has been complied with, when these people get their certificates of graduation. The law should be changed so that the letter shall conform to the spirit, and these persons should be given their diplomas on the day of graduation, as is done in almost every normal school in the United States.

The writer is forced to believe that when a person has completed a course of professional study that requires from two to four years of hard work and has had at least one year's experience, he has *earned* exemption from examinations. He is also compelled to believe that such preparation fully complies with the spirit of the law. And further, he is compelled to believe that the state superintendent was entirely right when he ruled that county superintendents have the discretionary power to grant certificates to graduates of the State Normal without examination.

The writer would be glad to see the law changed so that the same rule would apply to any other normal school whose course of professional study was as extensive and as thorough as that of the State Normal.

Mr. Joseph certainly did not understand all the facts in the case when he wrote his article.

A. T. EACHER.

 WHO IS RESPONSIBLE?

Mr. Editor:

If I may be allowed a little space in your JOURNAL I will give my opinion and ask the opinion of others in regard to a thought in Mr. Tompkins's article on "The Complementary Aspects of Education."

Mr. Tompkins says, if I understand him, that the individual may determine his own life; therefore, he is held responsible for doing so.

Although it seems absurd even to myself, yet I hold that God is responsible for every act and thought of the universe. This means that no individual is responsible for a single act or thought of his life; that man as well as every other creature is wholly a passive being and hence powerless to determine his own life. This is my own conclusion, for I have read neither Darwin nor Spencer nor Emerson nor any one else on this subject.

The fundamental principle underlying this theory is that of cause and effect. If it be true that nothing can exist without a cause, then I cannot conceive of more than *one* ultimate cause for all things and that is our idea of God. Mr. Ingersoll calls the same idea Nature.

If man is the ultimate cause of anything, then he is God's equal. Such a condition would destroy the very idea of God.

The difference, Mr. Tompkins says, between a Gladstone and an ordinary person is indicated by the extent to which each has made himself felt in the life of the world.

Now there must be a cause for them not making themselves equally felt. This may result from a difference in their natural ability or environment or both. If Gladstone put forth a greater effort than the other to make himself felt, there was something to cause such an effort, that was lacking in the other person.

Whatever the cause is, it could not originate with the person, but must be traced to the ultimate source of all things—God.

J. A. LINDSEY.

 QUESTIONS AND ANSWERS.

 STATE BOARD QUESTIONS USED IN JULY.

SPECIAL NOTICE.—For the six months beginning with the May examination, the questions in the Science of Education and Literature will be based on McMurry's General Method and The Tempest, respectively. The books will not be subdivided as during the last six months.

In answering the questions on The Tempest the teacher will be allowed to use the book.

GRAMMAR.—

"How e'er it be, it seems to me,
'Tis only noble to be good.
Kind hearts are more than coronets,
And simple faith than Norman blood."

- 1. Select the clauses in the first sentence. State whether they are principal or subordinate clauses. 10%
- 2. Select the entire predicate of each clause in the first sentence. 10%
- 3. What do "noble" and "good" modify? 10%
- 4. How is "coronets" used? How is "faith" used? 10%
- 5. Select the clauses in the second sentence. State whether they are principal or subordinate. 10%
- 6. Write a composition of 200 words on subject selected by the County Superintendent. 50%

ARITHMETIC.—1. I can buy goods from A, B, C and D at the same list price, but A will allow me 20, 10 and 5 off; B will allow me 5, 10 and 20 off; C 10, 20 and 5 off; D 20, 5, 10 off. Which will be the best purchase to make? Explain why.

- 2. Make concrete illustrations of the following problems:
 - (a) The minuend and remainder to find the subtrahend.
 - (b) The dividend, the quotient and remainder to find the divisor.
 - (c) Two or more sets of numbers to find the difference of their sums.
- 3. What is meant by arithmetical analysis?
Illustrate your meaning in the following: A man owning 7-9 of a farm, sold 1-3 of his share. What part of the whole farm had he left?
- 4. Illustrate, as to a pupil ready for the work, the division of 7315 by 35. Indicate clearly every step.
- 5. Bill:

Fort Wayne, Ind., January 9, 1896.

Robt. C. Bell,

Bought of John S. Irwin & Co.

150 bbls. Imperial flour at	\$3.50
28 bbls. Orient flour at	3.25
214 bus. Wheat at . . . . .	.55
300 bus. Oats at . . . . .	.33
125 bus. Corn at. . . . .	.28

Paid by check on First National Bank.

Write check, and receipt bill, made out in proper form.

6. What will be the cost of two joists 17 ft. long, 12 in. wide and 3 in. thick, at \$30.00 per M.

7.

Prin.	Rate.	Interest.	Time.	Amount
\$2, 000.00	7	?	5 yr. 6 mon.	?
?	7½	\$63.75	6 mon. 24 da.	?
\$750.00	6	?	?	\$942.00

- THE TEMPEST.—1. At all stages of the drama Ariel does Prospero's bidding. Express fully and clearly your thought as to what the poet would have you think Ariel to be.
- 2. On what conditions, as stated in the drama, does Ariel serve Prospero?
 - 3. How is it that Ariel at Prospero's command can become a nymph of the sea, make himself invisible, and the like?
 - 4. Who is Caliban, and what is his character? Substantiate latter part of question by a quotation from the book,
 - 5. The view is sometimes advanced that Caliban is the embodiment of

all that is sensuous and sensual in life, as Ariel stands for what is truly spiritual. Express your own views on the subject, using such quotations from the play as will verify these views.

PHYSIOLOGY.—1. Define anatomy.

2. Explain the functions of the epidermis.

3. What are the three essential parts of an organ of special sense?

4. Describe the structure and functions of the iris. What is the function of the vitreous humor?

5. What are general sensations?

6. What is meant by coordination?

7. Describe the cerebrum.

(Any five.)

GEOGRAPHY.—1. To what extent should the study of geography be combined with that of history?

2. Why is the climate of Great Britain so much warmer than that of the parallel latitude of the United States?

3. Name in order the six principal seaports of the United States.

4. What very important trade is carried on by those living on Chesapeake Bay in which the whole country is interested?

5. What does modern geography teach us as to the true method of studying geography?

6. What is your judgment of the topical method of studying geography? Why?

7. Show how the study of *form, place, plants, animals, minerals, atmospheric phenomena*, etc., may be made a profitable preparatory work for geography. What powers of the mind are developed in the primary geography work?

(Select No. 7 and any other 5.)

READING.—1. What are the two phases of reading when considered as a process?

□ 2. In studying a selection, which do you consider first, "the getting of the thought" or "the expression of it?" Why? Is there any choice here?

3. What is the purpose of *oral* reading?

4. What is the "word method?" The "sentence method?" Which do you prefer? Why?

5. What basis for reading has the average child when it enters the school-room at six years of age? Show clearly how a knowledge of this basis will aid the teacher in this subject during the first two or three months.

6. Define *theme, purpose, embodiment*.

7. Discuss the reading work as outlined in the State course of study for the first year.

(Select No. 7 and any other five.)

HISTORY.—1. What distinctive difference in the settlers of Jamestown and Plymouth colonies led to the failure of one and the success of the other?

2. Name three important events in the present administration of President Cleveland.

3. "The individual, the simplest historical unit, should be studied in the primary grades."—State Course of Study.

Show how the above may be used as a basis for history work in the first, second and third years.

1. What is meant by institutional ideas in history? Show how they may be used in primary history work.

2. What causes led to the settlement of Rhode Island? How did the principles of Roger Williams agree with those of William Penn?

3. Discuss the history work in the first six years of the State Course of Study. (Select No. 6 and any other three.)

SCIENCE OF EDUCATION.—1. Define induction.

2. Give a clear example of reaching a general truth by the process of induction.

3. By what process does the child form the concept *horse*?

4. If there is a natural procedure by which the child forms its new concepts, what influence should this fact have in determining the method of the school?

5. Give a somewhat detailed explanation of what you consider the true procedure in leading a child to form the true conception of a verb or an adjective.

6. What is the fundamental difference between induction and deduction? (Any five.)

ALCOHOL AND NARCOTICS.—1. What relation does the percentage of sugar or starch in any fruit juice bear to the amount of alcohol which can be produced from that juice by distillation?

2. How does overdrinking of alcoholic stimulants produce the terrible sickness of stomach which so often occurs in such cases?

3. What causes the peculiar and fearful hallucinations in "Delirium Tremens"?

Tobacco is known to act more directly upon the energies of the nervous system than upon its structure; why is this insidious evil the greater?

5. How is forced exercise, especially by walking, beneficial in opium poisoning?

ANSWERS TO PRECEDING QUESTIONS.

GRAMMAR.—1. "It seems to me" is the principal clause; "(though) it be how'er" is a mere concessive adverbial clause. "It is only noble to be good" is a subordinate clause in apposition with "It," the subject of "seems."

2. The entire predicates of these clauses are, (a) "seems to me (though) it be how'er;" (b) "is only noble," and (c) "be how'er."

3. "Noble" modifies "to be good;" "good" modifies the idea *person* in a general sense.

4. "Coronets" is the subject of *are much* understood; "faith" is the subject of *is more* understood.

5. (a) "Kind hearts are more," principal clause.

(b) "Than coronets" *are much*, subordinate clause.

(c) "Simple faith" *is more*, principal clause.

(d) "Than Norman blood" *is much*, subordinate clause.

ARITHMETIC.—1. Neither, because the direct discount in each case is

2. (a) Minuend, 327 apples ; remainder, 73 apples ; to find subtrahend. $327 \text{ apples less } 73 \text{ apples} = 254 \text{ apples}$.

(b) Dividend, 317 apples ; quotient, 19 (groups) ; remainder, 13 apples ; to find the divisor (or the number of apples in one group). $317 - 13 = 304$; $304 \div 19 = 16$; hence, there were 16 apples in a group.

(c) \$21, \$6, \$22 ; \$18, \$15, \$19. The sum of the first set is \$59 ; the sum of the second set is \$52 ; \$59 less \$52 = \$7.

3. By arithmetical analysis we mean that process of solving a problem in which we state, in logical order, the different steps taken, with the reason in each instance upon which each step is based. There is a separation of the question into its elements, and the reasoning is based upon the relations these steps bear, one to another, in logical order.

A man owning $\frac{7}{8}$ of a farm sold $\frac{1}{3}$ of his share ; what part of the whole farm had he left ?

First step. As he sold $\frac{1}{3}$ of his share he sold $\frac{1}{3}$ of $\frac{7}{8} = \frac{7}{24}$. Second step. As he owned $\frac{7}{8}$, he had remaining $\frac{7}{8} - \frac{7}{24} = \frac{14}{24}$; therefore, he had $\frac{14}{24}$ of the whole farm left.

4. The steps in this example have previously been taught to the pupil in short division ; the pupil here must be impressed with the fact that the steps are the same as they were in short division, and as the numbers are large he has the privilege of *putting down* his work as he goes along, instead of trying to keep it in his mind.

5. The bill amounts to \$867.70. (See arithmetic for the other points.)

6. $17 \times 1 \times 3 = 51$; $1880 \times 30 \times 2 = 3.06$. Hence, the cost will be \$3.06.

7. Interest, \$770 ; amount, \$2,770 ; principal, \$1,500 ; amount, \$1,573.75 ; interest, \$192 ; time, 4 years, 3 months, 6 days.

PHYSIOLOGY.—1. (See page 21, Advanced physiology). 2. See page 195. 3. See page 255. 4. See page 268. The vitreous humor (a) aids in preserving the globular form of the eye ; (b) and aids in refracting the rays of light.

The iris is a circular membrane situated just in front of the crystalline lens, with a round perforation, the pupil, near its center. The diameter is about one-half inch. The iris consists chiefly of muscular tissue, blood vessels and nerve terminations. The fibers are both circular and radiating, thereby explaining the phenomenon of dilatation and contraction of the pupil.

5. General sensations are those which are not due to any special organ, but which manifest themselves as coming from the body in general, as (see page 254).

6. (See page 233). 7. (See page 223).

GEOGRAPHY.—1. Precisely to that extent which the relations existing demand, and therefore varying in accordance with the number, extent and importance of them. In nearly all history the two are inseparably blended.

2. On account of the influence of the gulf stream. (The latitude of Great Britain is north of that of the United States.)

3. New York, San Francisco, Philadelphia, Boston, Baltimore and New Orleans.

4. The oyster trade.
5. That we should study physical geography first, and that largely by observation and investigation.
6. It is all right if it is a feature of the method in the subject itself; for then it is subordinate to the process that is in the subject, and is not a method but a device.
7. The subjects mentioned are all geographical elements. (*a*) The study of *form* prepares the way for the understanding of maps as to their outlines. (*b*) The study of *place* broadens their plane of vision and prepares them to understand locality. (*c*) The study of plants, animals and minerals in their own neighborhood creates a desire to know these objects as they exist in other lands, etc.

In the primary geography work, the powers trained are perception, observation, imagination, comparison and memory.

READING.—1. The process of oral expression and the process of silent reading.

2. The getting of the thought, because it is essential to the expression of it. There can be no choice.

3. The purpose of oral reading is to learn to read orally; or, if the reader is already a master of this art, the purpose may be the setting forth of the contents of a selection to please, to instruct, or to move to action, an audience. By the oral reading of the pupil, the teacher is guided in suggestions to him in regard to enunciation, articulation, etc.

4. The *word method* is that plan in which the *word* is regarded as the unit; in the *sentence method* the sentence is regarded as the unit. The *word method* is preferable, because the unit is more easily grasped and comprehended by the child; but in the sentence method and in others there are elements that sometimes can be used to advantage.

5. It has quite a knowledge of things in general, its environment. It has a good power of expression under the proper impulse—an impulse that has not been spoiled; it has a good vocabulary. These help the teacher to utilize the power of speech which the child possesses; and by their aid the teacher leads the child to see in the printed symbols representations of ideas.

6. (*a*) *Theme*—The central thought of the selection, the one idea for which all the others stand.

(*b*) *Purpose*—The effect which the writer desires to produce; the motive which urges the writer to utterance.

(*c*) *Embodiment*—The image which mirrors forth the theme of the selection.

7. (See State Manual.)

HISTORY.—1. In comparing the two colonies, we find that a much more definite plan of government had been worked out for the Plymouth colony than for the other. (See the Mayflower Compact.) The Plymouth settlers were honest, industrious, God-fearing men, and came to till the soil and to worship God. Most of the others came for adventure, for gold, and are usually styled in our histories a "motley crew." (See text-book.)

2. The president's declaration in regard to the trouble between England

and Venezuela, and the appointment of the Venezuelan commission; the sale of \$200,000,000 in bonds; the Pullman boycott; the extension of the civil service rules; and the repeal of the Sherman silver law.

3. It is clear that biographies of great men who were prominent in the formation and development of our nation form the proper material for the first instruction in history. These lives are made interesting to the children by selecting from them ideas and incidents that are appropriate and that come within their comprehension. The children are interested because the exercise is about *somebody*. The *individual* being a simple unit, it is easily grasped and therefore can be understood by the pupils of the lower grades.

3. (a) Those ideas which are embodied in institutions such as the *church* the *home*, the *state*, the *school*, *industry*, *society*.

(b) By having some of the conversational lessons based on these institutions as they are exemplified to the child in his own locality.

5. The spirit of religious intolerance banished Roger Williams from Salem. He was soon compelled to flee to the wilderness. He finally chose a place which he called Providence, at the head of Narragansett bay, for a new settlement. He made his refuge "a shelter for persons distressed for conscience." Both Williams and Penn promised their settlers freedom of conscience and equal rights.

6. (See state course of study.) Note that it begins with biography (see answer to 3) and that it gradually advances until the pupil can comprehend the idea of institutions and that the chief aim in it all is the development of moral character.

SCIENCE OF EDUCATION.—1. Induction is the process by which the mind moves from the particular to the general. It is sometimes called the *concept-bearing* process, because through it a general idea is reached from the examination of particular ideas.

2. See McMurry, chapter 5, for two illustrations.

3. See McMurry, chapter 5.

4. The child's mind tends to act inductively; it is the way he forms new concepts. By whatever way the child's mind moves in learning a subject, by that way should the teacher move in teaching the same subject.

5. Have a pupil to walk and then to state what he did: have him to run and again to tell what he did; then have him to write and once more tell what he did. These statements may be written by all the class and the words that describe the actions may be underlined. Now, state to the class that those words that express what the pupil did are called *verbs*. (Other examples may here be worked out). Next, tell the pupil to walk *quickly*; to run *slowly*; to write *neatly*; etc. Have the class write down sentences expressing what was done and underline those words that express *how* the actions were performed. Now, state to the class that those words that express how these actions are performed are called *adverbs*. (Find other examples.)

The foregoing is suggestive of the plan of procedure. It must be supplemented by the teacher having the pupils select from sentences words expressing what is said of things or subjects.

SCIENTIFIC TEMPERANCE.—1. Sugar is the only constituent that ce-

produce alcohol. (Starch by a peculiar ferment called "diastase" is converted into sugar.) Therefore the amount of alcohol produced from any juice is in proportion to the amount of sugar it contains.

2. The effect of alcohol upon the stomach is such that the mucous surface becomes surcharged with blood through the paralyzed walls of the capillaries and the secretion of digestive fluid is more or less disturbed and impaired. The result is that the absorption of food is retarded, digestion is imperfect, and the stomach, oppressed with nausea and in constant irritation, manifests by a "terrible sickness" its rebellion against this unnatural condition.

3. The inflamed, ulcerated, and otherwise diseased condition of the stomach and small intestines, affects through the sympathetic system, the already diseased brain, and brings on the state of "mania potu," or *delirium tremens*. In this condition, reason is dethroned, the animal centers excited, and the victim is under impressions which he cannot control. Alcohol has developed in him feelings that are superstitious and destructive, among which are rage, anger, fear, grief, distrust, despair, hopelessness, and melancholy. The functions of the eye and the ear are impaired, and as a result, strange sights and sounds are produced. The strange impressions modified by the many ungoverned feelings let loose by the loss of reason, cause the peculiar and fearful hallucinations in *delirium tremens*.

4. The continued ingestion of tobacco produces serious effects upon *nerve tissue*, but the changes which take place are very gradual and delusive and are scarcely perceptible under the microscope. The user is prone to conclude that tobacco does not injure his nerves, and the impairing of nerve energy goes on unchecked to work its ruin. Hence, it is said that the effects of tobacco upon the nervous system constitute a greater evil than its effects upon nerve structure.

5. Forced exercise augments perspiration, hastens the circulation of the blood and increases respiration. Thus, the opium poison is rapidly carried by the blood, from the cells, and excreted from the system. Moreover, this activity is followed by rest and sleep, and additional strength is thereby secured.

THE TEMPEST.—For answers to questions on the Tempest see first article in this number of the JOURNAL.

TOWNSHIP INSTITUTE OUTLINES.

GUIZOT'S HISTORY OF THE CIVILIZATION OF EUROPE.

TEST-WORK :—NOTES, TOPICS, AND QUESTIONS,
FOR USE AT TOWNSHIP INSTITUTES.

LECTURE I.

(The figures refer to pages in the book itself.)

1 Development of the idea of civilization as a *condition* (5).

Compare different people in different parts of the world and note their different conditions as to mode of life, customs, and institutions; as, the Esquimaux, the American Indian, the Malay, the Peruvian, the Mexican, etc. See also text-book (9, 10).

II. Call to mind the different kinds of facts—material and spiritual (3). Explain and illustrate each, and show to which class belongs civilization (3, 4).

III. Explain and illustrate the three kinds of history (See Preface, on pages 3 and 4). Discuss their relative importance and show to which kind the *history of civilization* belongs.

IV. *Civilization*:—(a) Show in what sense some might consider it an evil (4, Note). Discuss what might be called artificial wants such as hinder the true development of man.

(b) Its two meanings (5).....1. A condition, brought about by certain forces or tendencies operating in the past. It exists in various degrees: give illustrations. Illustrate the opposite of civilization.....

2. A *force* made up of several forces, emanating from the state, society, the church, the home, the school, industry, art, science, literature, philosophy.

What is meant then by the expression—*the progress of civilization*; the expression—*the civilization of to-day* (5)?

V. The "history of civilization" (5); (6). Civilization a universal fact (6). The standard by which the importance of an event should be measured (6). Facts influencing civilization through the individual (7).

VI. Hypotheses, suggesting (a) various *conditions* of people; (b) certain *ideas* comprised in the term civilization. State these *conditions* (9, 20); and *ideas* (11).

VII. To define civilization as the progress of society is too narrow. Explain (11).

VIII. Civilization has not always been the best where society has been the best organized. Illustrate (12, 13).

NOTE. During the Augustan age, literature was enriched by Virgil, Horace, Ovid, and Livy.

Some of the illustrious individuals who lived during the seventeenth and eighteenth centuries, and who gave so great a degree of superiority to civilization in France, were as follows:—Tycho Brahe, Kepler, Galileo, Rubens, Van Dyck, Richelieu, Pascal, Moliere, Turenne, Corneille, Condè, Bousset, Racine, Fenelon, Le Sage, Montesquieu, Mozart, Lavoisier, Cuvier, Beethoven, La Place, etc.

IX. The two elements in the fact of civilization (14). What it then means (14). The lines along which it has progressed (14). Why man sometimes opposes some great change in social condition (16). What do men hope for when there is an improvement in the individual (17)? Show that if any great force improves one of these elements, the other also becomes changed for the better. Illustrate by using Christianity (15 and note.) See 16, 17, 18, 19 for argument.

X. Is society formed for the individual or the individual for society? Discuss. (See 20 and 21, N).

The correct idea of man's earthly life (21, N). How can this idea be realized (21, N)? Things that will not bring it about (21, N). Evidence of a deep concern for the common interest of humanity (22, N).

XI. The two sources from which the history of civilization ma-

drawn (22). How far they may be considered separately (23, N). The purpose of the author; his plan (33).

XII. The present condition of civilization (24). A glance at the past condition of man 24.

XIII. The evils arising from thinking more highly of ourselves than we ought to think (24, 25).

A common characteristic of man (25); a necessary resolution here for every one; an age that has gone forever; a better time coming; a caution, posterity's demand of us; a resolve 25).

LECTURE II.

I *Character of the ancient civilizations* (26 ; mention examples and state in each case the dominant principle (26, 27).

Explain the theocratic form of government, and give examples, ancient and modern (27, N).

Illustrations from tradition of conflicts between opposing principles (27, 28 ; the general result (28).

Greek civilization: its strength; its weakness; its fate (28, N).

This character of *unity*; (a) Different results that arose from it; mention the nation, the ruling principle and the result (28, 29). (b) Its despotism (29). (c) How it manifested itself upon literature 29).

II. *Civilization of Modern Europe*:—Its various principles (29); their struggle and the result (30 ; its society compared to that of the ancients; diversity and conflict of ideas (30). No single ruling idea given entire control (30).

Her literature:—Its nature—why 31; why imperfect in form and simplicity 31.

Varied sources of modern civilization (31, N); its diversity explained 31 N. (This note should not confuse the reader. The author means that our diversity—our various forces moving together—may be considered a kind of unity, but not the kind of unity we perceive in the rule of a single force or principle.)

Compare the civilization evolved by a single principle with that moving on under the influence of various principles; give results (32, 33.)

"European civilization the reflected image of the world." Explain (33). In what consists its essential character 34.) Origin of its elements (34).

III. *Rome*. Her character originally (34). Character at time of the nations (35); of the country; of Rome's conquests; of her monuments 36). The weakness of the Roman Republic; the establishment of the empire (36; 37, 43, N ; despotism easily introduced 38, 39).

"Two phrases sum up the characteristics of Roman civilization in the days of the empire—heartless cruelty and unfathomable corruption."—*Farrar*

"The migration of the northern nations is the wall of separation that divides the ancient and the modern world."—*Schlegel*.

"The migration of the northern nations is nothing else save the history of the wars between the free Germanic races and the Roman masters of the world, wars which terminated in the dissolution of the Roman Empire, and in the foundation and first formation of the modern states and nations"—*Id.*

IV. *The Fall of the Roman Empire.* In what her strength consisted(39); against what she struggled; the result (39).

A step towards democracy(39 ; its fate, and why(42); why the empire fell; what it became(42).

The two elements Roman civilization bequeathed to us(43, 44). Illustration of the force of an idea(44, note).

V. *The Christian Church*:—A factor 44 ; its institutional nature (44); distinction between it and christianity(44, 45); the two compared as to their power and importance(45).

The debt we owe to the Christian church (45); its evolution (46, 47); the opposite theory (48, Note).

How the clergy and bishops got control of the city governments(49 ; the law in evidence (50); the advantages that accrued to the church 52); value at this period, of the Christian church to humanity(52); influence of Christianity as a religious belief (52, Note .

VI. The separation of temporal and spiritual power 53 ; the argument therefor(53); some influences of the church not beneficial(54. Two inconsistent attitudes of the church (54, Note).

VII. Summarize the elements of civilization which Europe received in the fifth century from the Christian church and from the Roman Empire(44,52, 53, 54).

VIII. *The Barbarian* :—His origin(55); his character and disposition (56).

The new elements he introduced into European civilization (57); this element distinguished from political liberty(57); the difference between its influence and that of Christianity 57); its importance 58 .

Another element from the barbarian(58); its importance (58 and 59, Note).

(The *barbarians* are sometimes referred to as the Teutonic or Germanic tribes.) Please bear this in mind.

IX. Two elements, in our later civilization, from the Germans 58, N).

X. The different societies on the stage at the fall of the Roman Empire (59 ; the different characteristics and elements brought together (59).

XI. The hard fortune of European civilization fraught with advantage (60 .

"From these four sources—Greece, Rome, Christianity, and the Germans—are derived the principal elements of our modern civilization. Whatever results the classic world had gained in material civilization, in wealth, and skill; in literature, philosophy, and art; in ideas wrought into common thinking; in organization and practice—whatever of these and other results might survive the period of ruin that was coming, passed over into the new civilization. Along with these came the new ideas of God and religion; of duty and morality; of the individual and his rights; new beliefs and sentiments; new practices in government; new energy and vital power, derived from Christianity and the Germans. From the mingling together of all these has come the common civilization of Christendom."—*G. B. Adams.*

PEDAGOG.

LITERARY INTERPRETATIONS.

All real thinking is a search for the nature, the creative energy of the thing under consideration; for the mind's motive to think is the desire to find itself in the object studied. The mind is a self-active, creative energy, and when it touches such energy in the object studied, it realizes itself in the object. To think an object is for the mind to find its own categories in it; and the highest category is that of creative, self-active energy. A search for the nature of an object is a search for the mind in the object. A student must find himself in what he studies. In this interest is awakened for interest in the feeling which arises in the process of self-realization. Interest is inherent in the nature of the subject and the nearer one approaches to its real nature the greater becomes the interest, because more of the self is realized.

The creative process in an object is its method, and this ultimately determines the movement of the mind in learning it. How literature is created is the guide to its study. The pupil must keep himself located in the spirit which urges the writer to utterance and note how all details are created and organized from this impulse. Such, at least, is the only method of critical study, such as members of the Reading Circle are supposed to make. The first step in the criticism of any work of art is that the critic puts himself at the point of view of the artist. From this point, all features must be seen in the process of development. When persons differ widely as to the merits of a work of art, it is because they view the work from different standpoints: they differ as to the creative motive.

FOOD FOR THOUGHT.

[Send all communications to W. F. L. Sanders, Connersville, Ind. They should be received by Sept. 18. Be prompt. Write only on one side of your paper.]

SOLUTIONS TO PROBLEMS.

PROBLEM 139. (This is deferred until next number).

PROBLEM 140. A person reaching the railway station thirty minutes before the train was due, starts to meet it. He walked $1\frac{1}{2}$ miles before he met the train. If he had gone in the opposite direction he would have been $2\frac{1}{2}$ miles from the station when the train overtook him. What was the train's rate per hour? (ALTON BLUNK, Crown Center, Ind.)

SOLUTION BY J. STOMMEL, Hanover Center, Ind.

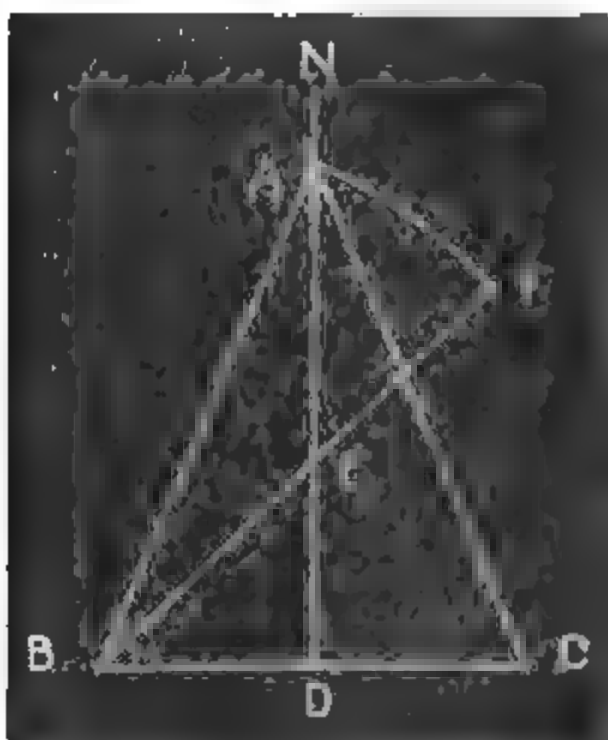
X $1\frac{1}{2}$ A $1\frac{1}{2}$ Y 1 Z

Let A be the station, X the place where he met the train. Had he gone in opposite direction he would have been at Y when the train was at X. Walking one mile further the train overtook him. Therefore, while he traveled 1 mile, the train traveled $1\frac{1}{2} + 1\frac{1}{2} + 1 = 4$ (miles). Hence, the train traveled four times as fast as the man. While he walked the $1\frac{1}{2}$ miles the train ran 6 miles. Hence, the train could run $7\frac{1}{2}$ miles in 30 minutes, or 15 miles an hour.

PROBLEM 141. Which is the better investment, the 10 per cents at $211\frac{3}{4}$, or the 2 per cents at $42\frac{1}{4}$? Which is the better investment, if $\frac{1}{8}$ is paid for brokerage?

SOLUTION. 10 per cents at $211\frac{3}{4}$ will yield $4\frac{1}{8}\frac{3}{4}$ per cent; 2 per cents at $42\frac{1}{4}$ will yield $4\frac{1}{8}\frac{1}{4}$ per cent. The 2 per cents are here better by $\frac{1}{8}\frac{1}{4}$ per cent. Counting in the brokerage ($\frac{1}{8}$), 10 per cents at $211\frac{3}{4}$ will yield $4\frac{1}{8}\frac{3}{4}$ per cent.; 2 per cents at $42\frac{1}{4}$ will yield $4\frac{1}{8}\frac{1}{4}$ per cent. The ten per cents are better here by $\frac{1}{8}\frac{1}{4}$ per cent (EVERETT BEADLES, Velpen, Ind.)

PROBLEM 142. Construct an isosceles triangle in which the altitude is a mean proportional between the side and the base.



SOLUTION. Take any line BC as the base of the required triangle and bisect it by the perpendicular DN. Take $DE = DB$ and draw BEF, making $EF = DB (= \frac{1}{2} BC)$. With center B and radius BF draw an arc, cutting DN at A. ABC will be the triangle required.

For $AC = BF = BE + DC = DC\sqrt{2} + DC = DC(\sqrt{2} + 1)$.

$$AD = \sqrt{AC^2 - DC^2} =$$

$$\sqrt{DC^2(\sqrt{2} + 1)^2 - DC^2} =$$

$$DC\sqrt{2 + 2\sqrt{2}}. \text{ Hence, } AC : AD ::$$

$$\sqrt{2} + 1 : \sqrt{2 + 2\sqrt{2}} \quad (1)$$

and since $BC = 2DC$,

$$AD : BC :: \sqrt{2 + 2\sqrt{2}} : 2 \quad (2)$$

From (1) and (2) we get $AC : AD :: AD : DC$.

JOHN C. GREGG, Supt. City Schools, Brazil.

PROBLEM 143. Given $x + y = 10$, and $x\sqrt{y} = 12$, to find x and y .

SOLUTION. $x^2y = 144$; $y = \frac{144}{x^2}$; hence, $x + \frac{144}{x^2} = 10$, or $x^3 - 10x^2 + 144 = 0$;

factoring, $(x - 6)(x^2 - 4x - 24) = 0$; putting $x - 6 = 0$, $x = 6$, putting $x^2 - 4x - 24 = 0$, we can easily find the other values.

$$x = 6; 2(1 + \sqrt{7}); 2(1 - \sqrt{7})$$

$$y = 4; 8 - 2\sqrt{7}; 8 + 2\sqrt{7}.$$

J. F. MILLIS, Bloomington, Ind.

Another solution:—Find x in each and equate the values, and we have

$$10 - y = \frac{12}{\sqrt{y}}; 10\sqrt{y} - y\sqrt{y} = 12; 10y - y^2 = 12\sqrt{y}; y^2 - 6y = 4y - 12\sqrt{y};$$

$$y^2 - 6y + 9 = 4y - 12\sqrt{y} + 9; y - 3 = 2\sqrt{y} - 3; y - 2\sqrt{y} + 1 = 1; \sqrt{y} - 1 = 1; \sqrt{y} = 2; y = 4; \text{ etc.}$$

[J. STOMMEL, Hanover Center.]

PROBLEM 144. I have 3 jars, A, B and C, holding 1, 3 and 5 gallons respectively. A is empty, B full of water, C full of wine. I fill A from B; I

fill up B from C, and pour the contents of A into C; I repeat the whole process. How much wine is there in B and C?

SOLUTION. After the first pouring process A has nothing in it; B has 2 gallons of water and 1 gallon of wine, and C has 1 gallon of water and 4 gallons of wine.

Now, filling A from B you will pour $\frac{1}{3}$ gallon of wine into A. Pouring a gallon of the mixture in C, into B you pour $\frac{1}{3}$ of a gallon of wine into B; then B will have $\frac{2}{3}$ gallon + $\frac{1}{3}$ gallon = $1\frac{1}{3}$ gallons (wine); C will have 4 gallons - $\frac{1}{3}$ gallon + $\frac{1}{3}$ gallon = $3\frac{2}{3}$ gallons (wine).

[J. D. FRENCH, Whiting, Ind.]

CREDITS TO PROBLEMS.

141, Everett Beadles, Velpen; 143, Hector Shumaker, New Paris; 142, 143, J. C. Gregg, Brazil; 140, 143, J. F. Millis, Bloomington; 143, 144, J. D. French, Whiting; 140, 141, 144, Walter N. Vanscoyoc, Crawfordsville; 140, 141, 143, 144, J. Stommel, Hanover Center, and W. F. Enteman, Leota; 141, 144, Boyd Wilson, Brownsville, Ind.

ANSWERS TO QUERIES.

QUERY 45. Divide 8 gallons of wine, (in an 8 gallon vessel) into 2 equal parts and use only a three gallon measure and a five gallon measure. Solution by W. F. Enteman, Leota, Ind.

Fill the 5 gallon measure, and from it, fill the 3 gallon measure and empty this measure into the 8 gallon measure and empty the 5 gallon measure into the 3 gallon measure. Now, fill the 5 gallon measure from the 8 gallon measure and fill up the 3 gallon measure from the 5 gallon measure and there is left 4 gallons in the 5 gallon measure.

Consider the vessels respectively as 8, 3, 5; their conditions after each pouring will be as follows: 8, 0, 0; 3, 0, 5; 3, 3, 2; 6, 2, 0; 1, 2, 5; 1, 3, 4; 4, 0, 4.

QUERY 46. What is the correct answer to Ex. 36, page 254, Indiana Complete Arithmetic?

The correct answer is 12%. The following arrangement will perhaps make it clear:—

CR.	CASH.	DR.
[Money taken in.]		[Money expended.]
\$44, proceeds of 1st sale.		\$40, the <i>investment</i> , and the 1st cost of coat.
\$36, proceeds of 2nd sale.		\$35.20, 2nd cost of coat.
<u>\$80, total income.</u>		<u>\$75.20, total expenditure.</u>
\$80 — \$75.20 = \$4.80, <i>gain</i> ; and this is 12% of \$40, the <i>investment</i> .		

CREDITS TO QUERIES.—45, J. D. French. W. F. Enteman; 46, Everett Beadles; 45, 46, J. F. Millis.

PROBLEMS.

145. The difference between the incomes derived from investing a certain sum in 4 per cent. stock at $112\frac{1}{2}$ and in $2\frac{1}{2}$ per cents at 75 is \$84; find the sum invested.

146. A and B run a mile in opposite directions. A's running is to B's as $6\frac{1}{2} : 5\frac{1}{2}$; B gets 4 seconds the start, during which time he runs $12\frac{1}{10}$ yards; find when and where he will pass A.

147. The base of a triangle is 952 perches; the perpendicular from the angle opposite is 255 perches, and the other two sides are to each other as 25 to 39; find the lengths of the two undetermined sides.

148. MR is a diameter of a given circle and PM is a tangent. Draw another tangent PS and draw SD perpendicular to MR. Prove that SQ is bisected by PR.

149 Given $xy + \frac{y^2}{x} = 40$, and $\frac{x^2}{y} - xy = 96$ to find x and y by quadratics.

MISCELLANY.

ARNOLD TOMPKINS'S book on School Management has been adopted by the Ohio Reading Circle for current year.

THE Hope Normal sends out its calendar for 1896-7. The course of study and the corps of instructors both indicate thorough, helpful work. Geo. W. Thompson is principal.

MONTGOMERY COUNTY employs 208 teachers and enrolled in its institute more than that number before the week was half out. Supt. Zuck knows how to have a good institute.

LIMA stands well as a school town. It has recently added materially to its school facilities. H. S. Gilhams who has charge, has reason to feel proud of the record he has made there.

WINONA SUMMER SCHOOL has been a great success. There have been over 200 students in all classes, 70 of whom were in the School of Methods under the care of W. A. Millis, supt. of Attica schools.

WATERLOO High School enjoys the distinction of having been awarded the World's Columbian Exposition Medal and Diploma for "Careful Work, Good Teaching, and Results." H. H. Keep is superintendent.

THE Rush county teachers have passed a resolution favoring a law compelling the State superintendent to examine all teachers' manuscripts, and upon issuing a license that such license shall be good in every county in the State.

DELFHI in its manual makes a good showing. Its course of study and all its suggestions indicate that the superintendent and the board are working along right lines. A special teacher in music has been employed for half time—the same teacher giving half time to the Monticello schools.

KOKOMO.—Supt. H. G. Woody's annual report to his board was so complete and contained so much that the parents and the average citizen ought to know that the board asked to have the whole report printed in the local papers. It made between four and five columns and is interesting and instructive reading—especially to the patrons of the schools.

RICHMOND will average a better class of school buildings than any other city in the State. Its Garfield building is perhaps the most complete building of its class in the State. The provisions in this building for superintendent's office, clerk's room, and the school board's room are not equaled in Indiana. Supt. Study planned these improvements and Sup't. Mott will enjoy them.

PERRY COUNTY held its institute this year at Tell City and it was counted a great success. Supt. F. J. George has matters well in hand and keeps things moving. At the close of an evening lecture by J. W. Carr, which was largely attended, the citizens tendered the teachers a reception and a musical concert. J. W. Carr and Mrs. E. E. Olcott were the instructors and gave general satisfaction.

THE Report and Manual of the Attica schools gives the course of study which is very suggestive, then it makes a report of the work actually done. The superintendent, W. A. Millis, is a close student and is doing a class of work in many of his grades not attempted in other schools. The fact that Mr. Millis declined a higher salary to go elsewhere, indicates the interest he is taking in the work he is trying to do at Attica.

NEW CASTLE has a new school building built according to the most approved plans and completely adapted to the uses for which it is intended. The twelve foot basement is of red sand-stone and the other two stories are of fine pressed brick. The halls are wide and the cloak-rooms are in the halls, from which they are separated by heavy wire netting. Superintendent J. C. Wier is having this building fitted as rapidly as possible with the best teaching appliances.

SUPT. GREENSTREET of Henry county is making strenuous efforts to have music taught in every school in his county. He is ably supported by the township trustees in his efforts. Books are purchased for all and W. E. M. Brown, of Knightstown whose article on "Music in the Common Schools" appears in this number of the Journal is preparing for publication an outline for their systematic use during the seven months. Mr. Brown is going to attempt the solution of the music question in a practical way.

THE Evansville Evening Tribune, August 6, is a twelve page edition, generous illustrated. On the page devoted to schools and school interests, we find a picture of Supt. Hester and the following graceful tribute to his work in the city.

"The superintendent is a man of marked administrative ability as has been plainly demonstrated in his successful direction of the school system. This, combined with great earnestness of purpose and a conscientious regard in carrying out whatever may be for the best interests of the schools, distinguishes him as a man eminently fitted for the important position which he occupies at the head of the school system of this city."

SUPT. BOLTZ, of Dunkirk makes a good showing for his schools in the "Dunkirk Weekly Star," under date of Aug. 14. After giving statistics of attendance, truancy, etc., he shows where improvement can be made. Two years ago, a school library was begun. From various sources money was secured until now the Dunkirk schools have 426 standard books in this library. In conclusion Mr. Boltz adds:—"And now as our people are excited as to whether gold or silver will be the salvation of our country, let us not forget that Education has a greater value than either. The children who have been properly educated are of more value to our country than silver, and those who have been trained to become good citizens are of greater value than gold."

PERSONAL.

J. E. BALLARD is in charge at Amo.

W. C. BOYD is principal at Greensboro.

J. H. HAYWORTH is elected at Waldron.

B. F. DURDOFF is in charge at Kennard.

H. B. PATTON stands first at Morristown.

J. J. COPELAND is principal at Plainfield.

W. O. HIATT is superintendent at Gosport.

J. F. EVANS is the best man at North Salem.

E. J. DAVIS has two assistants at Mooreland.

B. M. HANCOCK is the head teacher at Quincy.

O. C. STEELE can be found in charge at Ogden.

J. L. ARTHUR directs school affairs at Freedom.

W. D. TROUT controls the schools at Whiteland.

J. L. SHAUCK still continues in charge at Milroy.

MANLIUS KENT is the man to consult at Clayton.

B. S. FRALEY will respond if addressed at Linden.

J. M. KELLUMS will direct school matters at Pittsboro.

G. B. WELTZ will make his record at Wingate this year.

O. W. KENNEDY has charge of the schools of Coal City.

W. S. ALMOND will continue to hold the reins at Delphi.

F. C. WHITCOMB is principal of the Delphi high school.

J. N. PHILLIPS will direct the young ideas at Coatesville.

J. T. SOMMERS has charge of the schools at Hausertown.

A. A. LINDLEY directs the school interests at Springport.

ANNA WILSON is high school principal of Crawfordsville.

E. A. CUNNINGHAM has taken the schools at Waynetown.

J. U. JONES, with three associates, is taking care of Trafalgar.

ELMER BASSETT is the man to send books to at Fountaintown.

P. V. VORIS will continue to superintend the schools at Danville.

C. M. WALKER will have charge at Brownsburg the coming year.

M. J. SEARLE is doing what he can educationally to save Nineveh.

HOWARD GRIEST is the man that parents call to see at Darlington.

L. B. DYAR superintends the teachers and schools of Patricksburg.

W. B. VAN GORDER will remain a second year as sup't at Knightstown.

I. L. WHITEHEAD when away from home still checks his trunk for Troy.

MISS ALICE HARPER will be principal of the Cory schools the coming year.

I. M. WELLINGTON continues as superintendent of the Crawfordsville schools.

J. W. SHOCKLEY is the man who answers pedagogical questions at Straughn.

VIRGIL MCKNIGHT will succeed F. M. Ingler as principal of the Marion high school.

J. B. LEMASTERS of Franklin will superintend the schools of Kewanna the coming year.

G. P. WEEDMAN continues to please the people as superintendent of schools at Cannelton.

MRS. ROSA MIKELS has entered her seventh year as principal of the New Castle High School.

SAMUEL ABERCROMBIE has entered his fourth year as superintendent of the Rushville schools.

R. H. RICHARDS is superintendent at Spencer and O. P. Robinson is principal of the high school.

W. G. WARK, class of '93, State Normal, is now principal of the schools at Watertown, South Dakota.

J. W. CARR, superintendent of the Anderson schools, has a new institute lecture that delights his audiences.

J. F. WARFEL is superintendent, teacher and editor at Ladoga and is said to fill all demands in all directions well.

H. W. COFFMAN, a graduate of I. U. and also of the State Normal, will have charge at Middletown the coming year.

W. E. M. BROWN will have charge of the music the coming year in the schools of New Castle, Knightstown and Cambridge City.

J. E. LOUGH, instructor in Harvard University, did some very acceptable institute work in this state, along the line of experimental psychology.

O. P. FAIRFIELD formerly of Merom College has been elected Professor of Latin in Alfred University, N. Y. His friends will be glad to learn this fact.

R. E. CALL, formerly in the employ of the American Book Co., is the new superintendent of Lawrenceburg. P. M. Meek is principal of the high school.

W. F. HARDING, who has been instructor in the State University for the past year has been appointed to fill the chair of history and economics in Vincennes University.

GEO. W. NEET is superintendent of the Spiceland schools and the Spice-

land academy. He is filling this double relation with entire satisfaction to the town and to the academy.

QUITMAN JACKSON, superintendent of Hancock county, has formed a law partnership with E. W. Felt, the same to begin as soon as Mr. Jackson's present term of office expires.

MISS ELLEN HYDE is principal of the State Normal School at Farmingham, Mass. Massachusetts leads in placing a woman at the head of one of its state schools. Just think of it!

J. C. WEIR has entered upon his ninth year as sup't of the New Castle schools. He is an I. U. man, and spent six weeks of his summer vacation doing post graduate work at his alma mater.

JAMES E. HENRY, superintendent of Warsaw Schools, was principal of the Winona Summer School and A. J. Whiteleather superintendent of the schools at Knox was a teacher in the same.

W. H. HERSHMAN has been re-appointed superintendent of New Albany schools. He says the people in that city have not yet found him out. When they do find him out they will elect him for two years.

THE Morgan county institute passed resolutions in regard to the death of J. R. Starkey, showing the very high regard in which he was held by the people among whom he had lived for nearly twenty years.

JAS. C. BLACK has rented a house in Anderson and will be on hand at the opening of the new normal early in September. Prof. Black, who is well-known to Indiana teachers, is to fill the chair of Pedagogy.

J. H. TOMLIN will continue in charge of the schools at Shelbyville. His new buildings will enable him to do better work than ever before. That he will use to good advantage all added facilities goes without saying.

J. R. HOUSTON, formerly in charge of one of the ward buildings at Aurora, has been appointed to fill the place of superintendent of that city. Miss Anna Suter will have charge of the high school. The trustees have done well.

W. W. BLACK, well and favorably known to many Indiana teachers, has declined at least two good positions in order to go to school the coming year. He and his wife will attend the Illinois University and one of the strong attractions there is Arnold Tompkins.

HERMAN E. OWEN has been engaged as superintendent of music for the country schools of Vigo county. Vigo has set the example and Mr. Owen has the honor of being the first county superintendent of music in this state and probably in the United States.

CHRIS. NEWMAN, who is serving his eighth year as superintendent of the Tell city schools, has a right to feel proud of the medal and diploma recently received from the Columbian Exposition for excellence in drawing and written class work done in his schools. The JOURNAL is glad to note this honor.

PROF. R. J. ALEY, of Indiana University, will spend the coming year at the university of Pennsylvania. The conditions of the Fellowship awarded

him are that he shall devote his entire time to the study of mathematics. As Prof. Aley has already done a great deal of post graduate work in this line, this year's work will place him on the top round of the ladder.

J. W. BRAY, for several years a teacher in this state, is principal and teacher of English in the High School at Freeport, Ill. Mr. Bray took his A. M. degree from Indiana University in '92; for three years did graduate work in Chicago University. While there he wrote a book, now in press, entitled, "A History of English Critical Terms," Designed as a reference book for teachers of English in Colleges and High Schools.

C. M. MCDANIEL is the new superintendent at Madison. Last year he was principal of the high school of that city. Mr. McDaniel is a graduate of Wabash College from which institution he received the degree of A. M. in 1891. He commenced teaching in a district school near Crawfordsville. He has filled in turn several important places in country and town schools, and at 33 finds himself superintendent of one of our largest cities. He is one of the youngest superintendents in the state.

DR. JOHN S. IRWIN, who has been sup't of the Ft. Wayne schools for more than twenty years, has retired. The Doctor was actively connected with the schools many years before he was made sup't and the schools are to-day largely what he has made them. In addition to being superintendent, he has been supervising architect, supply agent, and general director in all departments. His work has been indefatigable, and his devotion has been absolute. Dr. Irwin has put his life into these schools and Ft. Wayne could well afford to retire him on liberal pay. His successor, J. N. Study will find the schools in excellent running order.

SANFORD BELL, who has superintended the Aurora schools the past year has accepted the chair of psychology and pedagogy in the northern Indiana normal school at Valparaiso. This is a merited promotion. Mr. Bell is a graduate of the state university and also of the state normal school. He also took pedagogical work under Arnold Tompkins while he was in the normal school at DePauw University. He is a young man of more than ordinary ability and has made a specialty of the subjects he is to teach. He will add strength to the already strong faculty he is to join. *Later.*—Aug. 26, Mr. Bell was married to Miss Gertrude Sumption who is also a graduate of the State Normal and a lady of many accomplishments. The JOURNAL extends double congratulations.

JAMES A. C. DOBSON, ex-superintendent of Hendricks county, died at his home at Brownsburg, Ind., August 11. Mr. Dobson's record, both as a man and educator, is an enviable one. He was superintendent of Hendricks county for ten years, filling this position with great acceptability. He originated the School Manual, copies of which were sent to the Paris Exposition by Superintendent James H. Smart, where they took first premium. He was the originator of the common school graduation of Indiana.

The teachers of Hendricks county, in institute assembled, at Danville, adopted the following resolutions:

WHEREAS, Death has removed from our midst our highly esteemed and honored co-laborer, ex-County Superintendent, J. A. C. Dobson, and

WHEREAS, He was not only revered and honored by this institute, but was regarded as a prominent and aggressive educator ; therefore, be it

Resolved, That we thus publicly acknowledge his valuable services in the cause of education in Hendricks county and educational interests in general, his great worth as superintendent and educational leader and his helpful exemplary life, and that we commend his professional life as one worthy the highest praise.

GEO. R. WILSON, superintendent of Dubois Co., owns and lives in one of the finest houses in Jasper. He is a man of affairs, and a friend told me that his check is good for \$10,000. He has made all this himself. With all this outside interest he pushes the county superintendency work as few other superintendents do.

W. F. LANDIS is the supervising principal of Center Township, Marion Co. He acted in this capacity last year and the results were so good that he has been re-employed to act in the same capacity the coming year. He does no teaching but spends all his time in visiting the schools and assisting the teachers. Of course he works under the direction of the county superintendent. Is this not a good idea?

BOOK TABLE.

STORY OF OUR COUNTRY. By Alma H. Burton, Chicago. Werner School Book Co. This is a United States history for young students. Most of the text is devoted to the colonies. The writer has given a vivid picture of the perils and sufferings through which the early settlers in this country passed and of their coming together to lay the foundation of broad and generous government. The central idea is the nation's development and not the wars through which the country has passed. The writer claims that her great aim has been to foster such a love of country that the next generations will, if possible, be truer Americans than those of the past. The mechanical execution of the book is very fine.

ELEMENTS OF PHYSICS. For use in secondary schools, by S. P. Meads, Oakland High School, Oakland, Cal. ; 12 mo., 288 pp. Introductory price, 72 cts. Silver, Burdett & Co., Boston, New York, Chicago, Philadelphia. This is designed as an elementary text book by which pupils may become grounded in the rudimentary principles of physics, and thoroughly familiar with the laws governing matter. While the author does not claim to have

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made an exhaustive text book on the subject, he has treated the prominent facts plainly and forcibly, and has invested his subject with an interest not always found in scientific works. The experiments are many of them easily performed with simple apparatus, and they are suggestive of others which the teacher can readily arrange with the help of his pupils. The book has elements that will make it extremely useful and attractive. The typography is excellent, special words are made prominent, and the finer type used for notes and experiments is clear and readable.

HOME AND SCHOOL ATLAS, by Alex Everett Frye, author of Primary Geography and Complete Geography. Ginn & Co., publishers, Boston, Mass. The various maps and charts used in the Atlas are from the author's Complete Geography. As the name indicates the Atlas is for home and school use. It seems to us most admirable. The maps contain the names of more than ten thousand towns, cities, states, countries, rivers and mountains, all of which can be easily located by means of the alphabetical list on pages 1 to 24. This Atlas will be found most helpful by older pupils in the preparation of lessons in history and literature at home. Several of the maps were prepared expressly for such use. Many small charts affording a key to the building of railroads and other highways of trade, to tariff and financial legislation make the book useful to farmers, mechanics, statesmen, and citizens generally. It should be in every home library.

"PRIMITIVE BUDDHISM; ITS ORIGIN AND TEACHINGS" is the title of a new book by Mrs. Elizabeth A. Reed. The recently awakened interest in the philosophies of the East and especially in the subject of Buddhism, will find a fresh impetus in the announcement of this work; it claims to present, in as brief a manner as is consistent with accuracy, the authoritative teachings of primitive Buddhism as found in the Sacred Books of the East, the official documents of the early Buddhists, and elsewhere. The book is to be published by Scott, Foresman & Co., of Chicago.

ELEMENTARY PHYSICAL GEOGRAPHY. By Ralph S. Tarr, B. S., F. G. S. A. Assistant professor in dynamic geology and physical geography at Cornell University. This is a thoroughly new work on the subject of physical geography, and is excellent in every particular. The illustrations are very numerous (nearly 300), and many of these are copies from photographs. They are true to nature and are collected from the most reliable sources. In this book we find a treatment of many points that we look in vain for in other similar treatises. The language is simple and explicit and the page strikingly easy and pleasant to the eye. A short list of books (authoritative sources) is at the close of each chapter to aid the student in making further investigations if he chooses to do so. From what we can see from a very close examination it embodies all the trustworthy knowledge on this subject to date. Price \$1.40. Address the MacMillan Company, 66 Fifth Avenue, New York City, N. Y.

TENNYSON'S COMING OF ARTHUR AND OTHER IDYLLS OF THE KING.—Edited by Dr. W. J. Rolfe.—Published by HOUGHTON, MIFFLIN & Co.

This book is uniform in size and binding with other volumes of Rolfe's

Students' series, and Rolfe's Shakespeare. It is the first annotated edition of these poems, published in this country or in Europe. Besides "The Coming of Arthur," the book contains "Gareth and Lynette"; "The Marriage of Geraint"; "Geraint and Enid"; "Balin and Balan"; "Merlin and Vivien". Dr. Rolfe has brought to this work the same ability and care that has made other volumes of this series valuable to the student and teacher. The notes are full and clear, and the index at the close adds greatly to its value. Price 75 cents; to teachers 55 cents.

THE September issues of *Harper's Bazar* will be notable for brilliant fiction and poetry. Among the contributors during the month will be Mary Hartwell Catherwood, who writes a vivid story of Mackinac life, entitled "The Black Feather"; and Octave Thanet, with a strong story replete with humor, "Why Abbylonia Surrendered." Elizabeth Stuart Phelps Ward will be represented by a strong poem, "The Last Answer." Among practical features we name the beginning of a series on Millinery, fully illustrated, and showing women how to trim and make their own head-gear.

HARPER'S ROUND TABLE published September 1st. will contain the first instalment of a new serial story entitled "In the Old Herrick House," by Ellen Douglas Deland. To the same number Dudley D. F. Parker will contribute an interesting paper on the art of sailing small boats. This article will be fully illustrated and will be found to contain many useful suggestions and directions for young yachtsmen.

A SCHOOL ALGEBRA designed for use in High Schools and Academies. By Emerson E. White, A. M., LL. D., author of a "Series of Mathematics," "Elements of Pedagogy," "School Management," etc.

Half leather, 12mo, 394 pages. Price \$1.00. American Book Company, New York, Cincinnati and Chicago.

THIS new algebra combines in one book a complete course in the study,—sufficiently elementary for beginners, and advanced and comprehensive enough to fully meet the entrance requirements of the best colleges and universities. The book constitutes a part of the well known and popular "White's Series of Mathematics." The author's aim has been to prepare a school algebra which should be pedagogically sound, as well as mathematically accurate, and thoroughly adequate for its place and purpose.

Some of the leading and distinctive features which will commend this book to teachers of mathematics are the following:

(1) The early introduction and practical use of the equation; (2) the application of arithmetical approaches to algebraic processes and principles; (3) the intelligent use of the inductive method; (4) the immediate application of facts and principles in simple exercises for practice; (5) the number, variety and character of the exercises and problems designed to secure facility and accuracy in algebraic processes. It is believed that few text-books have been prepared with more earnest effort to ascertain and meet the needs of the schools. *The result is a progressive, model algebra.*

WISELY'S SERIES OF GRAMMAR.—By J. B. Wisely, A. M., Professor of Grammar and Composition, Indiana State Normal School. Published by Inland Educator Publishing Co.

No. 1 in the series is *Language for the Grades*. It is intended for use in the first six years of a child's school life. Recognizing the fact that many children leave school before they have completed the sixth grade, Mr. Wisely has aimed to give in his book a practical acquaintance with good English. This is not accomplished in the old way through technical grammar but largely through exercises in talking and writing. The attention of the child is first drawn to the thought, and later to the correct use of the best word to express the thought. The lessons are worked out orally in the recitation and then the children reproduce them in writing. The reproduction is subjected to the careful direction and close criticism of the teacher. The selection of those parts of the book which are best adapted to her pupils is left with the teacher. No attempt has been made towards a consecutive arrangement of material. While this might work most satisfactorily with teachers who have both knowledge and experience we doubt whether it will accomplish the best results with the many teachers whose knowledge of the right order of study is largely dependent upon the book. The illustrations are a little disappointing. Either the printer has not done good work or the plates used are much worn.

II. A New English Grammar by J. B. Wisely is the second book in the series. Mr. Wisely justly claims that grammar should be studied in the same way as other sciences. As the plant or flower is the subject of investigation in botany and the animal in zoology, so in grammar the subject of study and investigation is the *sentence*. A change in thought requires a change in expression, so the study of the sentence according to Mr. Wisely's plan will lead the pupil to study the sentence in its capacity to express thought. The plan is first to study the sentence as a whole; 2—to classify sentences on a basis of meaning; 3—to classify them on a basis of form as determined by the form of thought. The pupil is led to make his own classification of words from the thought. Not only the classification of words has been made upon the thought basis but the nomenclature also. We must confess, however, to a preference for the terms used in the old grammars. We do not think it is any easier, (it may be more scientific) to say a *substantive word* than a noun or pronoun; an *attributive word* than an adjective and adverb. The old form had the advantage of brevity, certainly. Some of Mr. Wisely's definitions, formed as they are on the thought basis, are clumsy. For example we are told that "The Imperative mode is that mode or manner of assertion which shows that the thought in the mind corresponds to the reality in the external world on account of the necessity in external circumstances or will outside that of the actor." The old definition that the Imperative mode is that form of the verb which expresses command or entreaty seems far more rational. Mr. Wisely's plan is certainly excellent. It needs however, some modifications for the majority of teachers and schools.

INDIANA SCHOOL JOURNAL.

BUSINESS NOTICES.

SCHOOL BOARDS contemplating changes can learn the address of the best Western and Eastern teachers, willing to change places, by addressing Orville Brewer, manager of the Teachers' Co-operative Association, 101 Auditorium Bldg., Chicago. We can assure all who write of confidence and honorable treatment. 2-1f.

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THE MUNGER.—On another page will be found the advertisement of the Munger Cycle Company. There is no doubt that this company makes the best light wheel in the market. Only the best of material is used and every wheel is "high grade." It always pays to get the best. It is the cheapest in the long run. Call at office or write for descriptive circular.



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INDIANA SCHOOL • JOURNAL

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THE SUGGESTED COURSE OF STUDY FOR CITY AND TOWN SCHOOLS.*

D. W. THOMAS, SUPT. OF ELKHART SCHOOLS.

A new bonnet, a new beau or a new belle, has been known to produce accelerated heart action; how much more a new education, and a new course of study.

When requested to prepare a paper for this occasion, I was, so to speak, basking in the X Rays of Herbartianism.

Like the music of the spheres or the rythm of old ocean's tide, came floating through my mind the euphonious words, co-ordination, correlation and concentration, and with these the grand accompaniment—articulation, subordination and apperception, and amidst all, ever and anon, came the sweet refrain—monads, tabula rasa and an all absorbing many-sided interest.

Now the fluorescent screen is adjusted, the cathode light turned on, and indelibly stamped on the sensitive plate of my imagination are two pictures—the *old* education and the *new*.

Every apperceptive organ, every correlated tissue, every articulated bone is developed—all of the hideous incongruities of the one and all of the beauty, harmony and symmetry of the other. The *old*, a huge headless trunk, covered with R's in groups of three; to the *left*, a diminutive, disjointed fragment of an arm, representing the "culture studies;" to the *right*, a somewhat more obscure one, marked "nature studies," presumably so labeled that its identity might not be mistaken. In the background

* Paper read before the Northern Indiana Teachers' Association.

in clear and distinct outline appears juvenile humanity fleeing from the central figure as from an impending doom and in the forehead of each in large black-cap letters, "Escape for Your Life!"

In the *center* of the field of vision stands the *new education*, now represented by the Goddess of Liberty, and again by the statue of Apollo Belvidere, according as the apperceiving masses of patriotism or of aesthetics are brought into the focus of consciousness; but whether the one or the other the golden rod crown is the universal and inseparable adornment. The scene beggars description—all is ideally perfect; such beauty is never beheld, save when the young lover is reveling in the sunshine of his first endearment; "ring around a rosy" but faintly suggests the cohesiveness of such correlation, and such concentration is only equaled by the dropping of a worm into a school of minnows.

The *old* and the *new*—their counterpart—*before* and *after* taking.

Repressing my enthusiasm, not to say eagerness, to respond to this invitation, I simply replied, "I will try." How much lay concealed in these three little words! Here was an opportunity to, at least, rattle the dry bones of formalistic education; to outdo the Cleveland meeting, and to complacently look on while an astonished world read, in flaming headlines, Thomas, Harris and De Garmo, the three great educational epoch-making giants of the nineteenth century!

Under the stimulus of this vaulting ambition, I grasped my pencil and scratch-book and began thus: The soul is a tabula rasa so adjusted to the senses that through them, impressions from external excitants are accurately registered. That's it. Rock-bottom at last! was the mental ejaculation. Then continued—nature furnished (free of cost) each human organism one of these sensitive tablets upon which all individual experiences are recorded; and taking advantage of this scientific fact, I will now turn to my mental tablet headed, "Course of Study" and read it off just as one would a primer. Imagine my surprise and chagrin as I glanced over that page so fatal to my anticipated hopes. Such a jumble! Writings and cross-writings, erasures, interlinations, marginal references and injected into the whole an undecipherable conglomeration of all sorts of things on all sorts of subjects—the terrible result of the *old* education! Routed from

my first position, reluctantly, but hastily, I retreated to the great monad stronghold, placed my superior monad in command of the inferior, timeless, spaceless reals with which the world is filled, and there in masterly inactivity, and with pen in hand, awaited the generation of ideas and their concentration in assimilated masses in the focus of consciousness:

And there within my office door,
I sat, and sat, and nothing more.

At length, glancing over the right shoulder of my imagination, I beheld a somewhat elevated stretch of land, extending as it seemed, from the beginning of the race till now, upon whose summit, at irregular intervals, the epoch peaks stretched themselves sky-ward. Could I reach these heights, count the number of peaks, divide by this number the years that have elapsed since the race began, take this quotient as the measure of time for each year of the course of study, arrange the material of the several periods in the order of the evolution of the race, the problem would be solved.

According to the fashion of philosophers, as a kind of test, I put some questions to my theory, somewhat as follows: When did the race begin? Is there more than one race? If so, have they kept equal pace, so that all shall pass under the wire at the same time? From which stage of evolution should the count begin, protoplasm, monkey, or man? Here is the American Allegra and the African Bob, the German Fritz and the Chinese John, the Italian Lucile and Peter the Pale, the red-headed Kathleen and the young-man-afraid-of-his-shadow; would this hypothesis co-ordinate and correlate the mental pabulum for this mixture? I cease. Theory is silent! I repeat.—No answer!

At this juncture, even the desire to figure in the "following headlines" herein before named, had ceased, and the further attempt to struggle with this educational problem might have been brought to an abrupt close, had it not been for the reading of a timely article on the historical development and practical application of the theory of correlation by Maurice Thompson which may be summarized as follows: In ante-bellum days, in a sequestered spot, among the great Blue Ridge mountains of Rabun county, Georgia, lived Judge Dillard with his old house-servant, Rack. The Judge had retired from business and was devoting himself to biological pursuits, in which Rack likewise

took a great interest, or as Rack put it, "I want ter kotch onto de coroliation ob de biovology." It so happened that Rack's cabin was covered with pine boards, upon one of which a woodpecker was accustomed to drum for worms; and near by on a limb of a mulberry tree, a mocking-bird poured forth his morning lays. In a neighboring forest dwelt a 'possum that could, as Rack believed, "go out jes like a can'le when ye blow it." Rack had conceived the idea that there must be some relation existing between the hammering of a woodpecker on a pine board and a mocking-bird on a mulberry limb and the famous ulufta 'possum, so he went to Judge Dillard for reassurance and explanations. After due deliberation, the Judge gave his decision as follows: "Rack, there cannot possibly exist any correlation whatever between a self-eliminating didelphys Virginiana, a berry-eating minus polyglottis, and a dry fragment of pinus mitis struck by the mandibles of melanerpes erythrocephelas." "*Dey is! Dey is!* I say *dey is*," Rack ejaculated.

Rack was not to be turned from his purpose. Gradually, but certainly, the light dawned. The pine board and mulberry limb are taken from their places, planed, polished and fashioned, the famous 'possum was caught napping, killed and his skin tanned and dressed. Six long years have passed, but the correlation is complete—the banjo is finished. Next morning as Judge Dillard approached Rack's cabin, strains of music greeted his ear—music so tender, so touching, so hilarious, so comic, so sweet, so true, that for a time, the Judge stood entranced and then as he rapidly approached the door, Rack bounded to his feet, waved his banjo in the air and exclaimed—"Massa Dillard! Massa Dillard! Dis is de coroliation! Dis is de coroliation!"

Rack was right—"the whole world's kin." The universe is simply the manifestation of a generalized, unified plan. The philosophers, sages and poets of the ages have given expression to such a conception.

"All things, man and nature, have come from, and had their origin in the divine unity," says Froebel.

"All are parts of one stupendous whole,
Whose body Nature is and God the soul.
All nature is but art unknown to thee,
All chance, direction, thou cans't not see
All discord, harmony, not understood,
All partial evil, universal good,"

is Pope's version, and Tennyson in his own inimitable way writes:

"Flower in the crannied wall
I pluck you out of the crannies;
Hold you here, root and all, in my hand,
Little flower—but if I could understand
What you are, root and all, and all in all,
I should know what God and man is."

A recent writer on concentration truly says: "It would be impossible to draw real history out by the roots without drawing all of the other studies out bodily with it." But if history is thus related to all other studies, *they* are related to history. Then why limit the statement to history? Is it not true of geography and botany and language and literature and mathematics? Where does geography end and botany, zoology, or geology begin? How much of geography, or music, or drawing, or physics, or history can be known without the conception of form and number?

The roots of the present sink deep into the soil of the past. 36° and 30' is not the limit. There is no Mason and Dixon's line. The universe of God is a seamless whole and what are denominated subjects of instruction are but the warp and woof of this wondrous fabric.

The finite mind is limited in its investigations to particular phases or parts of this vast whole and thus have arisen what are known as branches of study—some of these seem to be more closely related than others, and hence groups or courses of study; not only so but certain relations exist between different groups of studies as well as among different studies of the same group, and therefore correlation; some one or more of the studies of each group should be found in each year of the course and should be pursued in a certain order and hence co-ordination; some subjects in each branch, some branches in each group and some groups of each system, because of their educational value, need emphasizing and therefore, concentration.

My first proposition, then, is that the different branches of study are necessary but artificial distinctions made to facilitate investigation—are parts of a symmetrical whole already co-ordinated and correlated and it only remains for the educator to arrange his scheme of study to correspond with the facts as they exist. My second proposition is, that mind is an entity—a unit—that it ~~has~~

certain powers or methods of manifestation, and from its very nature and the means by which it is developed, there must be an *order* of development, that is, that the "fact in the thing and the law in the mind" not only determine the *method* but the *order* of procedure. Why does not the child reason as well as the adult? Simply because he has not the data upon which to base judgments, or as we must now say, the apperceiving masses being absent or below the plane of consciousness, he can neither assimilate ideas nor perceive relations. What is true of reasoning holds good as to memory. Since it is somewhat difficult to remember what has never been known, the perception of facts must ante-date the remembrance of them. Since there must be ideas before they can be remembered, and since their retention is necessary to their *reproduction* and *use*, it is not a matter of choice as to how these educational processes shall be conducted, for this is already determined, but it is of primary importance to understand what these processes are.

My third proposition is that the purpose and aim of education should be to develop an ideal manhood and that the several subjects of study should be so selected and so arranged as best to subserve this purpose and secure this result. What these are must be determined by the nature of mind, the nature of the material employed and the uses to be made of the knowledge thus gained as conditioned by the environments of the being to be educated. This brings us to the consideration of "educational values" about which *so much* has been said and apparently *so little* known. Some, misinterpreting the meaning of Jacotot's maxim—"all in all"—have selected one group of subjects as the central core about which all others revolve and to which they are subordinated; others have selected *two*, others *three*, and still others *five*. The thought here suggests itself, that it might be well to make the *child* the central figure and use such material from the various subjects as *its interests* and *needs* demand.

However, an examination of the courses of study under the several plans reveals the fact, that, except in a few abnormally developed sporadic cases, the difference is largely one of classification.

The sequence of the branches of study, as well as the subjects of each branch, the number and kind of studies pursued in any given year of the various courses, and even the time allotted to

each are alarmingly uniform. When children, in answering a set of questions, use the same language and especially when they make the same mistakes, the teacher may rightly infer that some one has copied.

That all of the so-called branches of study are not of the same educational value, does not admit of question, but that *all are of equal importance* to the wholeness—the completeness of the educational structure, may not seem so apparent, and it is at this point that we as teachers are liable to make mistakes.

The little *point* of the auger is so small a matter that Webster's International makes no mention of it, but the boring process would be somewhat retarded without it. Compared with the immense boiler and huge driving wheels of the mogul locomotive, the *safety valve* is a very insignificant affair and the person who would claim that its money value or the time expended in its construction, is equal to that of the boiler or the wheels, might be suspected of being a disciple of the "old education" and yet the same care is required in the making and an engineer would as soon think of running his engine without the one as the other. The *mainspring* of a gold Swiss watch with a \$400 Juergeson movement, costs only \$150, and yet it is regarded as indispensable, except to the concentration monomaniac who, discarding the school program, wears his watch for ornament rather than use. So while "history studies" or "nature studies" may possess a greater educational value than arithmetic or spelling or the mechanics of reading, the latter should be just as well and as carefully taught as the former because they are the means by which alone the others are rendered intelligible; or rather these subjects are so closely related that if they are properly presented and the purpose of each duly comprehended they will strengthen and illuminate one another.

While it is true that the effect of much of the teaching in the past has been the practical isolation of closely related subjects, just now there seems to be some danger, in some quarters, of going to the opposite extreme, viz: to seek relations where there are none, or at least to pursue these relations until they become so attenuated as to dissipate thought, weaken judgment and confuse the learner. Every lesson should be a lesson in concentration and whatever material, wherever found, that will materially aid in fixing the thought, establishing a principle, or fortifyir

position, should be utilized and the course of study arranged with this thought in view, but there are well defined limitations that must be observed if the best results are to be secured. I know the argument is, that in nature there are trees, plants, birds, beasts, earth, air, water, sunshine and electricity inextricably intermingled, and yet the child, without the least semblance of classification, learns a vast deal in the first six years of its life.

Very true, but does it follow that the child, by the same method, would learn as much in the next six years or in any succeeding six years as it did in the first six?

Man is to have dominion over the earth—is to control the forces of nature. Nature's electricity tears down trees, burns up houses and destroys life, but controlled by man, it lights dwellings, runs dynamos and propels cars. Did you ever think that the luscious Belle Flower and Pippin were once little sour, bitter, puckery crab-apples and what produced the change?

To be sure the child's *school* education should begin on the same page as that to which it is advanced when it enters school; so that the transition shall not be too great; hence many of the sciences, as well as other studies in the primary grades, may be treated in an elementary way with but little or no attempt at classification; but as organized knowledge is the end sought, as the subjects are continued into the higher grades, specializations are necessary, but they should not be so isolated as to lose sight of the obvious relations existing among them. In other words a course of study should be an organized unity with parts fitly joined together and so, constituting one complete whole. A brief outline of a course might be somewhat as follows:

1. History, to include fairy stories, myths, biography, U. S. history and civics.
2. Nature study, including elementary geography, botany, zoology, physics and physiology.
3. Mathematics, including form study, drawing, arithmetic, concrete geometry and the application of algebra to the solution of arithmetical problems.
4. Language, including spelling, reading, composition and English grammar.
5. Literature, including selections from the best authors adapted to the needs and capacities of the children of the several grades. In the lower grades especially, these selections should be made

not only for their intrinsic value but with the purpose of broadening, strengthening and supplementing the work included under nature studies, history and language; in fact much of it belongs under these heads.

These different lines of work should be so arranged that one step shall prepare the way for the next and so articulated that there be no " yawning gulfs " between, and the cross-sections or co-ordinations such, that whatever there is in one subject that will aid in the elucidation of another subject at any given place in the course may be found in the same parallel of latitude. Thus there are provided longitudinal and latitudinal highways of thought and all of these intellectual roads lead to Rome and Rome is the subject under consideration whether that be history, geography or arithmetic.

I am here reminded that my subject is " The Course of Study, " and as there is but *one* " The course of study, " I am supposed to pay my respects to the course formulated by the committee appointed for that purpose by the state association of city and town superintendents.

Those of you who are familiar with this course have doubtless already discovered, that I am in hearty accord with most of its provisions and with the recommendations of the committee therein contained. The work outlined for the history and the nature studies is especially helpful and suggestive. The emphasis given to the study of the best literature throughout the course, cannot in my judgment, be too highly commended. Had it been in the plan of the committee to give with the title of each book, the price, name of publisher and a short characterization of each book, it would, doubtless, have aided in making selections and of facilitating adoptions. I think it would have been an improvement to have indicated the work for the first, second and third years separately; and many of the fairy tales, fables and myths might have been omitted with profit. The selection of such lessons from the readers as have educational value and the substitution of standard literature for the fifth reader will meet the approval of every thoughtful teacher. Had the fourth reader met a like fate, it would have been an advance step in the interest of " young humanity, " to say nothing of the teachers.

The supplementary reading matter has been carefully selected and for the most part well graded, though in a few instances the

books designated are too difficult for the grades for which they are recommended. I concur in the recommendation of the committee for a single text in geography and in arithmetic, but why it still clings to *three* books in language, among which not even "Rack Dillard," could find the correlation, I am unable to determine.

By way of parenthesis, I may here say, that I am thoroughly inclined to the opinion that the best interests of the schools would be subserved if but one text were placed in the hands of the pupils in each of the following subjects, viz: Geography, arithmetic, language and U. S. history, and that aside from the supplementary reading matter but three reading books are needed and that these should be made to supply the demand for the best literature in the primary grades as indicated in the course under consideration. In the higher grades let entire selections be taken from the best authors, selected with the view of strengthening and broadening the other work. In addition to this, in the subjects of geography, language and arithmetic, teachers' manuals should be prepared, giving somewhat in detail, suggestions, methods and material which would assist the teacher in giving intelligent and systematic instruction in these subjects up to the point where the texts begin.

In regard to shortening and enriching the course in arithmetic, if the committee means that concrete geometry is to be employed for the purpose of amplifying and elucidating the work in mensuration, and algebraic methods are to be applied to the solution of arithmetical problems, I heartily concur, but if this work is to be divorced from that of arithmetic and separate texts used, I as emphatically dissent. The suggestion of character-building by means of the common school branches, presents a subject furnishing food for consideration, and the claim is valid to a degree not always realized by the teacher, but the attempt to form character with foundations no deeper and aspirations no higher than these furnish, is much like the playing of Hamlet with Hamlet omitted.

The "determinative propositions" are comprehensive and aside from the importance given to the culture epochs, so far as I understand them, are correct, and I think their value would warrant a translation into English.

A word as to the classification of subjects into "culture studies," "nature studies" and "formal studies" and I am done.

As I see it, every branch of study has a *thought* side and a *form* side and it is often necessary to pass from the one to the other in a single recitation; and certainly no branch of study (if there are any such) should be placed in a course of study that has no content and is *not* a means of culture. So while the use of these terms may be admissible for purposes of classification, there must be a great deal of latitude permitted in their interpretation. But it may be inferred that since the so called "culture studies," and "nature studies" (that is the *content* studies) are given so *much prominence* in the course and so *little time* in the schedule, that this classification is to be taken in a somewhat Pickwickian sense. I have long since learned that it is much easier to raise objections than to suggest remedies and I have no disposition as I have no occasion to enlarge on this phase of the subject.

I had the honor of appointing this committee and I wish to thank them personally for formulating this most helpful and suggestive course of study and to ask for it, from the teachers of northern Indiana a thoughtful and careful study.

HISTORY STUDY IN THE FOURTH AND FIFTH SCHOOL YEARS.

CHAS. A. MCMURRY.

In teaching American history in our common schools certain reform ideas have made themselves manifest in the last few years. First, the history is begun much earlier in the grades, often in the fourth or fifth grade, sometimes earlier still. Secondly, biographical stories of our earlier history have naturally taken the place, for children, of the regular chronological statement of important events, beginning with Columbus or the Norsemen. The idea still largely prevails that even a primary history must cover the whole era of our annals from the beginning down to Cleveland's administration. But we are gradually breaking away from the firm old traditional idea that school history means a more or less brief summary of important events in their chronological order.

It seems probable that within the next few years history teaching in our common schools will undergo still larger changes. Upon pedagogical grounds we may even prophesy what some of these changes are likely to be.

1. The neighborhood of the school and home is liable to give the starting point for the children's earliest history stories. The early pioneers and settlements, the stories of men in the neighborhood who have been remarkable for their character or public services, will give the children their early tuition in real, near-lying history. Just as the family history and kinship lie nearest to the home, so the larger social life of the neighborhood finds its closest connections in earlier local history. The study of these neighborhood annals and characters will give children, at the start, a sense of realism which is usually lacking because the things narrated are so far away in time and space.

2. Closely following upon these neighborhood stories come the choice pioneer biographies of the home, state and of the larger region of which it is a part. (Ohio Valley, New England, California, etc., for example). Nearly every part of the United States is rich in choice biographies of this sort. Our country was explored, opened up and settled by a hardy, energetic and courageous class of people, and their prominent leaders were naturally select men of stalwart qualities. The wilderness, with its difficulties and dangers, furnished an abounding field for the deeds of personal energy and prowess. In the fourth and fifth school years the children are of an age and temper to enjoy these variations of adventure and exploration. It is clear that in such cases we break with all strict chronological sequence. Nor are we seeking primarily to inoculate a knowledge of important events. The main purpose is to awaken a strong interest and appreciation for the characters of this stirring pioneer epoch. It is just the kind of material from which to kindle the strong, generous impulses and activities of children. The fourth and fifth years of school life show a ready sympathy for these simple biographical stories, so strong in character pictures and so rich in the interesting detail of life in our beginning commonwealths.

A number of books in cheap form has been published furnishing these materials in a form suitable for teachers.

3. Experience with these stories in the school room is likely to show that the fitting way to interest the children is not by putting books in their hands first, but by oral presentation. They are not yet ready to catch the meaning of these pioneer narratives from books. They greatly need the vividness and spirit engendered in an oral narrative by the teacher. Two or three years

later they can learn to use books in history, but now they need a live instructor who knows how to live the story over again with the children. The oral work, indeed, with its graphic and illustrative devices, serves to realize history as no text book can. This realism and the appeal to the imagination in teacher and pupils are especially needful at the very beginning of history instruction. This lays one clear imperative upon the teacher, skill and tact in the art of oral instruction, in telling and dressing up a story. While this appears at first as simply an added burden, it soon changes into a delight. The teacher will never have a better chance to acquire the art and to enjoy the pleasure of expert teaching. Good oral teaching is the most difficult because it is the most spirited and best kind of teaching. While it frees the teacher from the narrow limits of the text books, it lays down certain requirements of simplicity, logical order and graphic presentation which call at once for full knowledge of the subject and tact in adapting it to the children. A teacher never fully realizes how much children need concreteness and illustrative device till he essays real oral instruction. Then the total insufficiency of book-memorized lessons shows up. The power to think things vividly is the first great requirement both for teacher and pupil, and this is indispensable for both in good oral work. At least half the burden of thought in oral work must be borne by the pupil. His restatement of the story following the teacher is a prime requisite.

Into our present plan of the school course and of the daily program of recitations oral instruction does not find an easy entrance. The time devoted by pupils to study at their seats seems to exclude oral teaching. There is a common belief among teachers that seat-study develops self-activity and self-reliance, while oral work is entertainment or play. Teachers generally do not cultivate such a mastery of their subjects nor such a skill as are necessary in oral teaching. Text book work is much more mechanical and automatic. It is a kind of machinery which the teacher can set in motion or throw out of gear at any moment. It keeps up a constant appearance of activity which is reassuring. In fact, a large amount of text book study and seat work is unavoidable. Good oral work is only a necessary preparation for it.

THE ENGLISH SPARROW.

[The following composition written in Jan. '96 is the original work of the pupil—was not corrected by her teacher. The request for its publication is made that it may be a companion to "*Turdus migratorius*" in the June number INDIANA SCHOOL JOURNAL, page 420.]

GRACE GREENWOOD ELY.

[Fifth year, age 11, School No. 4, Fairfield township, Tippecanoe county.]

Outline a whole	{	size	Parts {	plumage
		color		head
		covering		neck
		shape		wings
				feet
				mouth
				beak
				eyes
				tail
				body
				toes
				breast
				habits

The sparrow is about the size of a baby bantam when it has first hatched out. Its head, feet, and tail are short. It is about four and one half inches long and about one inch wide.

Its breast is white, and its head, back, wings and tail are brown and black with a few white feathers. The underside of the wings are white.

Its covering is brown, black, and white feathers. Some of the feathers are about one half of an inch long, some of the feathers shorter, and some of the feathers longer. It is not very long thick nor wide.

The plumage on the back and breast is thick but not as thick as that on the wings. The summer plumage on the sparrow is more brilliant than that of winter.

The head is about round with brown feathers that are soft and lay nice and slick on it. There is one white streak on each side of the head from the eye to the back of the head.

The neck is short and round covered with many soft brown feathers. The neck runs from the head to the body, and forms the support for its little head.

The sparrows wings are not very large. There are three rows of feathers on each wing. Each feather on the upper row is about one half of an inch long. The second row is about an inch long. The lower row is about two inches long. The inner part of the feathers on the wings is black. The outer part is white.

The sparrows feet are limber and easily broken with four small short toes on each foot. They are fastened to the legs and the legs are fastened to the body and are what the little bird walks on.

Its mouth is on the inside of its beak and when it opens its beak you can see its mouth. Its mouth is not very large and it can not take very large bites at a time.

With its beak it carries food to its young in the nest. Its beak is made of a hard substance and comes out to a sharp point. Its eyes are black, round, and not very large. They are in its head nearly straight back from its mouth. The sparrow looks out of its eyes and sees the things in the world.

Its tail is small with twelve feathers in it. The feathers are brown and nearly even at the tip. Its tail is used as a rudder. When it is flying very fast or its best it will spread out its tail and hold it against the atmosphere and it cannot fly any more then it stops and turns very quick the way it wants to go.

Its body is long and is covered with brown, black, and a few white feathers which are soft. Its neck, feet, wings, tail, and feathers are attached to its body. Its toes are thin and short with long sharp nails on them. Its breast is covered very thick with soft white feathers. The birds like to stay around the house they build their nests in the eaves of the barn, in chimneys of the house, and in old hollow trees. They will watch the cows and when they are done eating the sparrows will watch till they go away then go and pick up the little things that the cows have left. If you go around the straw a great many sparrows will fly out. The sparrow is not a beautiful bird, but its habits are interesting, and its lively chirp pleasing. During summer numbers of insects are devoured by the sparrow.

“Do not blow your own trumpets; nor, which is the same thing, ask other people to blow them. No trumpeter ever rose to be a general.”—*E. E. Hale.*

ORIGIN OF ARBOR DAY CELEBRATIONS.

JOHN B. PEASLEE.

At the request of the editor of this JOURNAL, I herewith give the origin of "Arbor Day" celebrations, now so universally adopted in the schools of our country. Arbor Day for planting trees for *economic* purposes originated in Nebraska in 1872, and between 1872 and 1882 only two other states had adopted it, viz: Kansas and Minnesota. The day was set apart in each of these three states for the sole purpose of planting trees, and in many places prizes were offered to those who succeeded in having planted on that day the most trees. There were no celebration exercises in connection with the planting. It is evident that such a day would not be designated except in the so-called treeless states where the planting of trees is an absolute necessity for economic reasons. The designating of a certain day by the governor or the legislature of a state as "Arbor Day" is one thing, but the *celebration* of the day by declamations, essays, speeches, music, etc. is entirely another thing. The latter should not be confounded with the former. The *celebration* of tree-planting or "Arbor Day" celebration as it is now called, has no connection with the Nebraska "Arbor Day" first designated by Governor Morton.

Indeed, when I inaugurated the celebration of "Arbor Day" in the public schools of Cincinnati on the 27th day of April, 1882, I knew nothing of the Nebraska "Arbor Day."

The origin of "Arbor Day" *celebrations* refers back to the revolutionary war and is as follows: A short time before the centennial celebration of the battle of Yorktown, the authorities at Washington sent an invitation to the three grandsons of Gen. Von Steuben of revolutionary fame, to attend the celebration. When it was known in Cincinnati that the brothers had accepted the invitation, a meeting was called by a number of prominent Germans for the purpose of inviting them to visit Cincinnati before their return to Germany. The invitation was accepted and upwards of eleven hundred dollars were raised for their entertainment. Without entering into all the details, I will state that an important feature of their entertainment consisted in taking the brothers in carriages through Burnet Woods Park, Clifton,

Spring Grove Cemetery, the zoological gardens and Eden Park. These places are remarkably beautiful, made so largely by the trees, and are the pride of every Cincinnatian.

Now, it so happened that one of the Von Steubens was one of the chief forest officers of Prussia, an "Ober Foerster," as the Germans called him. He naturally introduced the subject in which he was especially interested, and spoke eloquently upon the influence of forests upon soil, climate, productions, floods, etc., and expressed his surprise not only that the wholesale destruction of forests was permitted in this country, but also that nothing was being done to restore them. His talk made a deep impression upon the gentlemen in the carriage with him, one of whom was Col. W. L. DeBeck, a newspaper man; another, Judge Warren Higley, then President of the Ohio Forestry Association, of which I was also one of the organizers.

Col. DeBeck conceived the idea of organizing in Cincinnati an association for the United States and Canada, to be known as the American Forestry Congress, and of making the occasion one of the grandest and most impressive Cincinnati ever had. The Colonel consulted a number of the members of the Ohio Forestry Association, which resulted in a conference in Judge Higley's law office of the following gentlemen: Judge Warren Higley, Col. W. L. DeBeck, Rev. Dr. Max Lillienthal, Superintendent John B. Peaslee, Hon. John Linkinson, Col. A. E. Jones, and Hon. Emil Rothe. At this conference it was decided to adopt the recommendation of Col. DeBeck. As it would require a considerable amount of money to do this, it was resolved to hold a meeting on the day following, at the Gibson House, and to invite to that meeting many of the prominent and public-spirited citizens of Cincinnati, lay the plans before them, and endeavor to obtain their influence and assistance.

The invitations were sent out, and a large and enthusiastic meeting was the result. At that meeting some one suggested that on one day during the week of the congress the exercises be held in Eden Park; that a grand stand be erected there for the speakers; that the various clubs and societies and others be invited to march in procession to the park. The thought flashed through my mind that I would have the pupils of the Cincinnati public schools go to the park and plant and dedicate trees to American authors. I thereupon said to the gentlemen present

that I would carry the celebration of American authors that I had previously introduced into the schools into the park and have the children plant and dedicate trees to authors with literary and other exercises. The recommendation was accepted with enthusiasm. I was appointed Chairman of the Committee on "Arbor Day Exercises," and the celebration of tree-planting took place after the plan I devised, now known as the "Cincinnati plan." It was estimated that more than 50,000 people were present, 20,000 of whom were children of the public schools, and so great was the impression made upon the children as to the beauty, value and usefulness of trees that not a single tree was injured or in any way disturbed by them, although, after the formal exercises were over, they were allowed to roam and play at will in the great park.

The next year each school had a granite "marker" placed near its group of trees, with the name of the school and the author in whose honor or memory the trees were planted and dedicated cut upon it, and the Arbor Day celebration again took place, that of each school around its special group in "Authors' Grove," the name given to the grove of about six acres in extent planted and dedicated by the public school children of Cincinnati in Eden Park, April 27, 1882. In 1884 the "Arbor Day" celebration took place in the several school houses, but in the years 1885 and 1886 the day was celebrated by the schools in Authors' Grove. Since my retirement from the superintendency, "Arbor Day" has been celebrated annually by the schools, but always in the school houses or upon the school grounds, as in 1884.

After I had given the history of the origin of Arbor Day Celebrations before the Shelby County, Indiana, Teachers' Association, the reporter who signed himself "Wax" said that my talk would do well for an agricultural association but was out of place in a teachers' institute. No doubt "Wax" will consider this article out of place in an educational journal, if his attention is ever called to it. In this connection I quote from a letter written to me in 1886 by J. T. Headley, author of "Napoleon and His Marshals," "Washington and His Generals," "The War of 1813," etc.

"It is gratifying to see Ohio take such deep interest in tree planting, which is begining so strongly to attract public attention. Setting apart one day for this purpose and making it a general

holiday will add attractiveness to utility and give it a deeper hold on the popular heart. But the happiest thought of all was to make it a holiday in the public schools, and have the children practically take part in it and set out groups of trees for their favorite authors. You thus not only connect trees with the associations of childhood and their pleasantest holidays, but with authors from whom they receive their earliest and best impressions."

"We sometimes forget that the highest aim of education is to form right character—and that is accomplished more by impressions made upon the heart than by knowledge imparted to the mind."

"The awakening of our best sympathies—the cultivation of our best and purest tastes—strengthening the desire to be useful and good, and directing youthful ambition to unselfish ends—such are the objects of true education. Surely nothing can be better calculated to procure these ends than the holiday set apart for the public schools."

SHAKESPEARE BOOKS.

JONATHAN RIGDON.

At the request of a large number of teachers and students I desire to name in this issue of the Journal, a number of books that will be helpful to us in reading and understanding the poet. For convenience of reference, I shall name, so far as I am able to do so, the publishers and prices of books referred to.

Next after the Bible, the works of William Shakespeare ought to be in the library of every reader. Of the annotated editions of Shakespeare I would place Hudson's first. I regard Hudson's notes as helpful to the student as any others and as the most convenient in their arrangement, being placed on the same page as the text they explain. This edition is in twenty volumes. It is published by Ginn & Co., Boston, and sells for \$30. They make it also in ten volumes and in three, at a much lower price. Rolfe's Shakespeare in forty volumes, published by Harper Brothers, New York, contains notes almost, if not quite as good as Hudson's, but they are placed in the back part of each volume. This arrangement has the advantage of not disfiguring the page and the disadvantage of being a little inconvenient for reference. This set sells for \$20.

If one desires an edition of Shakespeare with but few notes and at the same time desires a very beautiful set of books, I would recommend the Temple Shakespeare, published by McMillan & Co., New York, and edited by Israel Gollancz. The editor contributes to each volume a concise preface, a full glossary, and brief notes. Each volume has a frontispiece in photogravure, and a specially designed title-page by Mr. Walter Crane. This edition of Shakespeare's Complete Works, in thirty-eight handy volumes, is by far the most beautiful edition that has yet appeared. The volumes are printed in black and red on hand-made paper, and show that great care has been devoted to every detail of production. Price per volume, 45 cts. to 65 cts., according to the style of binding. This is an elegant and scholarly edition of Shakespeare, printed in bold and legible type, and yet of so compact and handy a form that it may be light to hold and convenient to carry in the pocket. Or, for a very cheap and yet good single-volume edition of Shakespeare, I would recommend *the complete works of Wm. Shakespeare* (Students' Edition) 1097 pages, price \$1, published by T. Y. Crowell & Co., New York and Boston, from the text of Clark & Wright. This has a good-looking and substantial binding, a copious glossary, and an index to familiar passages and to characters. The print is small but clear.

Another good single-volume edition is published by A. L. Burt, New York, and edited by W. G. Clark and W. Aldis Wright, and sells for \$1.25. This edition contains an introduction to each play adapted from the Shakespeare Primer of Prof. Dowden, and has also thirty-five full page illustrations. I do not know of a more useful edition of Shakespeare in one volume than this.

Now in addition to the complete works of Shakespeare every student of the poet ought to have at least one good commentary on Shakespeare. There are many good ones but in my judgment the one most helpful to the student, most suggestive of significance, is Denton J. Snyder's commentaries on Shakespeare in three volumes, price \$6, sold by the Indiana Publishing Co., Danville, Ind. Hudson's commentaries on Shakespeare, published by Ginn & Co., are also very excellent. No earnest student of Shakespeare can afford to omit any word that Mr. Dowden has to say on the subject. He is the author of an Introduction to Shakespeare, price \$1, and also of a more extensive commentary called *The Growth of Shakespeare's Mind and Art*, the price of which is \$1.50.

In the list of Shakespearian commentaries ought to be named also that by Dr. G. G. Gervinus, price, \$5.25, published by Chas. Scribner's Sons, New York, and also the commentary of Richard G. Moulton. Before one who is not a historian attempts to read Shakespeare's historical dramas, he must have access to English History in Shakespeare's plays by Beverly E. Warner. Price, \$1.75, Longmans, Green & Co., New York. In naming these as good books for students to possess, I wish to say simply, that I have studied to make the list short rather than to make it long.

PRIMARY DEPARTMENT.

Edited by MRS. SARAH E. TARNEY-CAMPBELL, Supervisor of Instruction in the
Anderson Schools.

PURPOSES OF PRIMARY GEOGRAPHY.

The main line of work in the first and second years should be what is usually called nature work. It should consist of a study of the most common flowers and animals. It should try to encourage the child to use his eyes and ears and hands. This work should make the child reasonably familiar with the most common plants and animals around his home. He should also, if he does not live in the country, be led to plant different kinds of seeds, watch them grow and at different stages of their growth make as careful a study of the plants as he is able to make. It may be unnecessary to speak of this point but a particular instance came under my observation a short time since which shows this to be necessary. A young man of probably eighteen years asked me about certain flowers in our garden, and I told him that they had been raised from small plants but that they would grow from the seed. He then inquired if there is seed on the plant now, and I answered that I had cut all the flowers off this summer and there would be no seed. In some surprise he asked if the plant would not have seed if the flowers were cut off.

In just as much sincerity and honesty he pointed to some stalks of corn and wished to know if in order to raise corn we planted the "fuzzy stuff on top." He explained that he never had been on a farm, but he supposed there were quite a good many things there that one might learn. Now this young man has been in our own high school and one year at Notre Dame, besides his regular grade work. This particular case has made me feel more

strongly than ever that especially in town and city schools primary nature work is almost a necessity.

This nature work should have for one part of it at least the preparing of soil in boxes and baskets and the actual planting of corn, beans, peas, and flower seeds and watching their development. It is very clear that this work is not so necessary in the district schools, but a few judicious questions from the teacher will open the eyes of the country children to the habits of the plant and animal world with which they think they are so familiar, and yet which they do not understand.

If one looks at the subject of primary geography from the standpoint of the material which is at hand and which the child can easily grasp, he is overwhelmed with the amount of work which presents itself. To determine what particular things the child had best consider in this stage is to see if possible what primary geography should do for the child. Primary geography, (let us consider in this article) refers to the work of the first, second and third years. This assumes that at the beginning of the fourth year the child is able to take up a systematic study of the subject and that it is best that he should do so.

What should the work that presents itself do for him?

The child should get two things from his first three years of school life in this particular branch. In the first place he should acquire some definite notion of his own home life and surroundings. In the second place he should have some good general notions of the greatness of the world and its people, of the variety of climate and the productions of the earth. This should also include a general idea—a very vague one of course—of the great size of the earth, of the continents and of the oceans.

Let us consider first what are some of the definite notions which the child should get from his primary geography. This may be classified in various ways but for the sake of being perfectly clear and at the same time suggestive enough for any one who wishes to carry out this line of work, I will group them about his own home life—the house, food, clothing. A careful systematic study of this kind can hardly be done before the third year. Let us see in what the study of these three things would result.

Let us take first the study of the house, or shelter. If the class is in the country, let them consider the desirability of different

farms in the vicinity, and if it is in town do the same thing with vacant lots which they can actually visit and determine for themselves their favorable and unfavorable features. They must consider how near they are to the business part of town, or if it is a farm, how near it is to the town itself; they should see on what part of the farm the house should be erected and why, how much the farm or lot will cost, and many other things that will naturally come up in this work. The child will be able to get a great deal of this information from his parents.

Let the pupils plan the house which they will build and draw this plan to a certain scale. The teacher at all times suggests conveniences such as bath rooms and closets, and should insist that the house which they decide to build should be one of three rooms at least, and a bath room. The cost of such a house as this some of the children will be able to determine from their parents, and it is easily seen that the number work in considering the cost of the house and lot would be a valuable feature. If it is possible, have some member of the class visit a lumber dealer and find out what kind of lumber is usually used for studing, siding, finishing and shingles. These different kinds of lumber can be made a part of the geography work in finding out where they have grown and what work has been necessary to get them ready to put into the house. This work can be amplified to almost any extent.

Food. The children can easily state the main things that are used in their home as food. Of course one of the principal ones is bread, and in connection with a talk on that, will come a talk on wheat, where it grows and how it is raised. If they live in the country, they will already know whether it is grown in their district, but if they live in town it may be necessary to plant wheat in a box and see how it grows, and to have some stalks of wheat that have already ripened brought into the school room. Other work with corn, beans, peas, etc., should also be done, and in considering these the children should learn whether they are raised around their own homes or whether they are shipped in. For instance, in a great many towns in Indiana the beef that is used for meat is not gotten from the farmers living in the surrounding country but is shipped in from Chicago and comes from the great western plains.

But there is another class of articles used in every household that should also be considered, and these are rice, sugar, spices, tea, coffee, salt, etc. When these are studied, they should be studied not only in themselves and in their relation to us as food, but in connection with these things the children should be given somewhat of the history of these productions, including of course the particular region of the world where they are found and some of the peculiarities of the people living in those places.

Clothing. The two most common materials used in the clothing which the children wear to school are of course cotton and wool. Of these, wool is the one which if they live in the country is more commonly known. In the study of wool as a material for clothing will come somewhat of the study of sheep and sheep raising as an industry, and in many sections of Indiana the children will find this industry to be one to which the farmers frequently give considerable attention. In the study of cotton, the whole thing will have to be done from stories and pictures which the teacher and children may be able to find. It is also very helpful to have cotton bolls to show the class. The processes of the manufacture of clothing out of these materials can not be very fully entered upon at this time. Flax should also receive some consideration as a plant that is used for clothing.

It is easy to see what some of the different notions are which the children could get from such a study of their home surroundings. As soon as anything is used to help build the house, or to be eaten, or to be made into clothing, which is not found in the child's own home, at that point he begins to see that there is an important part of the world out side of his own community. He is beginning to have some notion that the world is larger than the part that he sees or the little district or county in which he may live. In the study of sugar-cane, cotton, rice, tea, coffee, which we have already suggested, he has been finding out a little more of the great size of the earth, of the differences in climate, differences in people, differences in occupations, and yet after all that each depends upon the other. In connection with this, and especially in connection with the buying of the farm or lot, and in laying out the house, the child will get one of his first notions of the map—the idea of its construction, and the directions.

In a general way this states the main features that will be considered in this primary work. Some of the books that will be

helpful are those which have been mentioned again and again, such as Seven Little Sisters, Each and All, Aunt Martha's Corner Cupboard, Frye's Primary Geography and Frye's Brooks and Brook Basins. In the study of the different industries that are found in the child's own community and county he is going to see the different physical features in his particular locality and Brooks and Brook Basins will help re-inforce this phase of the work.

THE INDIA-RUBBER MAN.

Quite a good many years ago, probably when your grandfather was a little boy, a queerly dressed man was often seen on the streets of New York. The children called him the India-rubber man and I'm sure when I tell you about him you will think he was well named.

No matter how bright and full of sunshine the day might be, this man would be out with a rubber coat, vest, shoes, hat, and even the cravat around his neck was made out of rubber. Sometimes he carried a cane and this too was a rubber one. People all made fun of him and in a short time everybody knew him and everybody called him the India-rubber man.

Now, what do you suppose could have made this man wear clothes made out of rubber when rubber was very expensive and this man was very, very poor? I'll tell you. People had long known about rubber. They knew it was good to rub out lead pencil marks and that was the reason they called it rubber. When Columbus came to this country, the Indians had a ball made out of something which he had never seen before. These balls bounced better than any he had ever seen at home and it was not very many years until the Spainards were getting some of this queer substance and taking it back to Spain. The Indians cut strips of bark off of a certain kind of tree and a milky juice ran out. In a few hours this juice would be solid and this solid lump was called India-rubber. The people of to-day still get the rubber in much the same way.

After a long, long time people began thinking it would be well to try to make shoes out of it. Shoes were made, but just think whether you would like them or not. In winter time they would freeze as solid as stones and in the hotter part of summer they would melt.

This queer India-rubber man was trying to find out if there was anything that could be done to keep this rubber from melting and freezing. So he made clothes of it and had it everywhere with him. He worked many long weary years but could not find out any way to make the rubber better.

One day he had a piece of rubber in his hands with some sulphur and was holding them over the stove. He accidentally dropped the rubber and sulphur on the top of the hot stove. What a dreadful smoke and smell! And he was sure his rubber would all be melted and burned up. But to his surprise the rubber did not melt. That night was very cold and he left the piece of rubber out of doors to see if it would freeze. Early in the morning he hurried out to look at this precious piece of rubber. No, it had not frozen! This, then, would be a way of fixing the rubber so it could be used for clothing—heating it with sulphur.

Now this India-rubber man was very anxious to try another piece of rubber and see if he could make it like his first piece. But he was so poor he could not buy any. His friends and neighbors had to send in food, clothing, and fuel for his family. I am sure you never could guess what he did to get some money. He sold his children's school books!

It was still many years before rubber overshoes and mackintoshes came to be made as we now have them. I am sure your mamma can easily remember when she first saw gossamers and rain-coats and rubber bats. But all these things as we now see them, we owe to the India-rubber man who thought about rubber for many long years and who finally sold his children's books to buy material to experiment with. This man was Charles Good-year.

LEND A HAND.

(This department is conducted by Mrs. E. E. OLCOTT.)

"Look up and not down
Look forward and not back
Look out and not in;
Lend a hand."

HOW TO MAKE AND USE A HECTOGRAPH.

In the primary department of the April number of the SCHOOL JOURNAL, there appeared a recipe for making a hectograph. It was so simple and inexpensive that there seemed no reason why

every reader who desired that very useful article, should not make one.

But an obstacle was revealed by a teacher's remark: "Yes, I saw the recipe, and would very much like a hectograph, but I was so sure I'd make some mistake, and waste the materials and my time, and in the end have no hectograph that I didn't try."

So, determining to "lend a hand," the editor made two small hectographs, one of gelatine, the other of glue, and herewith gives such detailed directions that you can hardly make a mistake.

I.

Why you should have a hectograph.

For the benefit of those who do not know, or have given little thought to the value of a hectograph as a teacher's assistant, we briefly enumerate the following points:

1. It enables the teacher to prepare work when most convenient. Instead of being compelled to place written work on the blackboard, before or after school, the teacher may at home at her ease, on Saturday if she chooses, reproduce the same lesson on the hectograph and give copies to individual pupils.
2. More work may be given than the space on the blackboard would permit. Such concrete problems as, "How many legs have three chairs if two of them each have one leg broken off?" require so much space that only two or three can usually be placed on the board at one lesson. With the help of the hectograph, ten may be presented as easily as two.
3. It trains primary pupils to gather thought readily from written words. In grades in which arithmetics are not put in the hands of pupils, it has been noted that pupils can readily solve problems read aloud by the teacher, which they utterly fail to master if the same problems are presented in writing. Judicious practice in solving written problems will be of great benefit to such pupils, bridging the gap between the oral and the printed problems which they will meet in books in higher grades. The hectograph makes this written practice work possible.
4. It is a great convenience in presenting supplementary work from other books. Abstract as well as concrete problems, language exercises and selections in reading, may be taken from the teacher's reference books, and a hectographed copy given to each pupil. So that, so far as that lesson is concerned, he practically has the use of the book from which the work was copied.

For first grade pupils, lessons may be copied from Werner's, Fundenberg's, Appleton's and other first readers. The picture which usually accompanies the lesson may be shown to the children and they will read with zest the script or printed copy of the "story." Short nature or myth stories may be presented in the same way.

5. Number, word and sentence builders at twenty-five, fifteen or even ten cents a box are too expensive to be given to each member of even a small class by teachers who must furnish their own "primary aids." But very patient, persevering teachers may buy one box and hectograph copies of its contents for her pupils.

6. The "sliced memory gems" mentioned in the desk-work of a previous JOURNAL may easily be prepared for busy work.

7. Primary teachers and kindergartners who sigh at the expense of sewing card designs, will find the hectograph a friend in need. Buy one copy of a design, ink it carefully, and reproduce as many copies as you wish.

II.

How to make a hectograph. Hectograph composition is made of gelatine or glue, and glycerine. Inquiry reveals that the proportions of these may vary considerably and yet a satisfactory duplicating substance result. A large double slate makes a convenient receptacle to hold the composition, or, for a trifle, a tinner will make a shallow pan with close-fitting cover.

The recipe we use gives the *proportions* of 1 oz. of gelatine or glue, to 2 fluid oz. of glycerine. The number of ounces needed depends upon the size of the slate or pan which is to hold the composition.

4 oz. of gelatine or white glue,
8 fluid oz. of glycerine

will fill two sides of a large double slate.

Soak the gelatine or glue in cold rainwater for half an hour, allowing a gill of water to an ounce of gelatine or glue. Then squeeze out all the water possible, if glue has been used, it should not have dissolved in the water but should look swelled and tough. Heat the glycerine in a double boiler, add the soaked gelatine or glue, stir constantly, till all of the glue is dissolved. Heat the slate or pan, see that it sets perfectly level, then pour

the hot composition carefully in. If any bubbles appear, prick them immediately with a needle. Let the composition cool for twenty-four hours and the hectograph will be ready for use.

A double slate may have both of its inner sides filled, so that two duplicating surfaces are made, and the sides closing together form a cover for each other, keeping out dust, etc. Fill the slate to the level of the frame work, the hinges will prevent the faces of the composition from touching.

The deeper the receptacle, the longer the hectograph will last, so in ordering a pan made it would be well to have it twice, or more, as deep as a slate.

Gelatine is rather better than glue, being less sticky. Cox's gelatine can be bought by the package of almost any grocer. It can also be bought by the ounce.

If glue is chosen, only *white*, also called milliners' glue should be used, the darker, cheaper kind is not satisfactory. The white glue is retailed by druggists at five cents an ounce, which is the same as the usual price of gelatine. Glycerine sells at the same price. So that a safe estimate of the cost of a homemade hectograph would be:

4 oz. of gelatine or white glue,	\$.20
8 fluid oz. of glycerine,	.40
Slate,	.25
	<hr/>
	\$.85

If, after a time, small holes appear in the surface of the composition, hold a hot flat-iron close above them, this melts the substance, and makes the holes disappear.

A double boiler may be improvised by setting a pint cup inside a half gallon cup of boiling water; an oyster can set in a tomato can will serve the same purpose.

The more glue there is in proportion to the glycerine, the tougher the composition will be, and, vice versa, the more glycerine the softer the substance. If the hectograph seems too tough—hard—in winter, keep it in a warm room, or even warm it slightly before using. If too soft in summer, keep it in a cool place.

If it is too tough or too soft to do satisfactory work, or has been used so much that it needs refilling, remove the substance from the frame, and dissolve it, adding more glycerine or glue, as

the case requires. The ink will sink to the bottom and the hot composition may be poured off and used as at first.

III

How to use the hectograph. When ready to use your hectograph, have at hand a soft wet sponge, a dry cloth, some linen paper for making the impression, and some porous paper taking the copies.

Use any good hectograph ink, and write on the linen or other glazed paper what you wish duplicated. Practice is necessary to write so as to make a good copy; if not enough ink is used the words will be faint, if too much they will be blurred. A good guide is to see that each letter has a bronze shade when dry. Be sure the ink is perfectly dry, before applying the copy to the hectograph, but do not use a blotter.

With the sponge, wet the face of the hectograph with warm or cold water, remove surplus moisture by laying on a piece of the porous paper, then lay the prepared copy upon the hectograph, carefully smoothing it down with the cloth so that it adheres perfectly. Let it remain from one to three minutes, so that the ink will soak in well, remove it, and then rapidly take the copies upon the porous paper, smoothing each down and removing it immediately. It will be convenient to have a large book at hand to receive the copies at once, for they tend to roll up when damp, but lie flat if put in press without delay.

If the copies grow faint before you have as many as you wish, sometimes moistening the hectograph again will serve to brighten the impression.

Wash the hectograph when you have finished, and dry it with porous paper.

From six to twelve hours must elapse before the ink will sink so as to permit the use of a new copy over an old one. For that reason it is convenient to have the two sides of a double slate.

If you leave the paper too long on the face of the hectograph, it will adhere so that it must be soaked and peeled off, bit by bit, and that side can not be used again for hours. If, undaunted, you turn to the other side of your slate, but forget to remove the surplus moisture, that copy will be too blurred to be used, and that side of the hectograph will be like unto the other, and further hectograph work must be deferred. (The editor learned th

foregoing by experience!) It is said that if in making the hectograph, Cooper's gelatine is used, the copy may be washed off, and another copy be used at *once*, which would certainly be a great convenience.

Almost any sort of paper, glazed or unglazed, ruled or unruled, may be used. But linen or some similar paper is recommended for writing the copy, because it will not absorb the ink, while unglazed or porous paper is better for taking copies because it will absorb the ink from the hectograph. For primary pupils, copies taken on lightweight manilla cardboard are more satisfactory, as cardboard is more durable, and does not soil, crumple, or tear so easily as paper.

Such cardboard as is used for sewing cards is excellent. Sewing cards 5 by 8 inches may be bought of Heybach-Bush Co., Bul-litt and Main Sts., Louisville, Ky., for twenty-five cents per hundred, which is much cheaper than Kindergarten supply houses furnish them, and they are excellent for hectograph work. Good hectograph inks may be made by dissolving one package of diamond dye in one ounce of hot water, and adding, when cool, one-half teaspoonful of ether. It must be kept tightly corked, and is no cheaper than to buy it ready made. Pomeroy's ink is said to be excellent.

DESK-WORK. ABSTRACT PRACTICE PROBLEMS.

(1)

$$(\frac{1}{2} \text{ of } 12) \times 2 =$$

$$(\frac{1}{3} \text{ of } 12) \times 2 =$$

$$(\frac{1}{4} \text{ of } 12) \times 2 =$$

$$(\frac{1}{6} \text{ of } 12) \times 2 =$$

(2)

$$\frac{1}{3} \text{ of } 3 = \frac{1}{2} \text{ of}$$

$$\frac{1}{3} \text{ of } 6 = \frac{1}{2} \text{ of}$$

$$\frac{1}{3} \text{ of } 9 = \frac{1}{2} \text{ of}$$

$$\frac{1}{3} \text{ of } 12 = \frac{1}{2} \text{ of}$$

(3)

$$\frac{1}{3} \text{ of } ? + \frac{1}{2} \text{ of } ? = 2$$

$$\frac{1}{3} \text{ of } ? + \frac{1}{2} \text{ of } ? = 4$$

$$\frac{1}{3} \text{ of } ? + \frac{1}{2} \text{ of } ? = 6$$

$$\frac{1}{3} \text{ of } ? + \frac{1}{2} \text{ of } ? = 8$$

(4)

$$8 = ? + ?$$

$$8 = ? + ?$$

$$8 = ? + ?$$

$$8 = ? + ?$$

(5)

$$2 = ? + ?$$

$$2 = ? + ?$$

$$2 = ? + ?$$

$$2 = ? + ?$$

NOTE: In (4) and (5) the same combination must not be used twice, thus $8 = 1 + 7$ must not appear but once.

We sing in all the other months, but in October gay
The very singers are the ones who turn aside to pray;
Such glory shrines religion; souls inspirations take,
Thus buoyed to adoration as if an angel spake.

—Emily Gilmore Alden.

DEPARTMENT OF PEDAGOGY.

Conducted by ARNOLD TOMPKINS, Chair of Pedagogy, University of Illinois, at Champaign.)

"WHO IS RESPONSIBLE?"

Under the above title, in the September JOURNAL, Mr. J. A. Lindsey takes exception to a thought which I had expressed in "The Complementary Aspects of Education." It is the thought "that the individual may determine his own life; therefore, he is held responsible for doing so."

He says that, "Although it seems absurd even to myself, yet I hold that God is responsible for every act and thought of the universe. This means that no individual is responsible for a single act or thought of his life; that man as well as every other creature is wholly a passive being and hence powerless to determine his own life."

And yet Mr. Lindsey seems to hold me rather than God responsible for a thought which I expressed in the JOURNAL. In the same article, I gave the complementary aspect of man's responsibility, which Mr. Lindsey seems to have overlooked; for which oversight I shall hold him responsible and not God. Mr. Lindsey is exactly right in thinking that there is a God who is responsible for man's responsibility. He simply makes the mistake of supposing that the two sides are contradictory and that both cannot be true. He thinks he is in a dilemma when he is confronted by a paradox. One may have to seize one 'horn of a dilemma in self-defense, but he must seize both horns of a paradox to find the head of truth out of which both grow. Men worry their lives out in, what is to them, the dilemma of God's transcendence and immanence. They feel obliged to think him as one or the other, when in fact, he is both transcendent and immanent—must be so to be an infinite God. He could not be transcendent without being immanent, nor immanent without being transcendent; neither could he be God without being both. Man has been beating back and forth between free will and necessity to discover at last that both are true. In ascending from the lower to the higher order of beings, it may be observed that the increasing freedom is always accompanied by increasing necessity. The closer the limit the higher the freedom. Man is under the necessity of exercising free will.

An object cannot be red without being green; that is, it breaks up light and absorbs the green rays, which permits it to throw off the red. The quantity of a thing is its quality; the subject is object, and the object subject. We cannot choose between altruism and egoism as principles of conduct. The most intensely altruistic is the most intensely egoistic; and to be truly egoistic is to be truly altruistic. Altruism is the method of egoism, and egoism is the method of altruism. Fortunately, we do not have to decide whether it is materialism or idealism that is true or false. Each is true in and through the other, and it takes both to constitute the whole truth.

Both God and man are responsible and both determine. When it is said that man determines his own life, God is not excluded from that determination, for man is not said to determine his life wholly. And further, he does not determine the fact that he determines his life. Therefore, Mr. Lindsey states a great truth when he says "that God is responsible for every act and thought of the universe." I do not see why he should say this "seems absurd even to myself." It does not seem so to me. His feeling of absurdity may indicate the glimmering of the truth that with man there is also responsibility. How could this be otherwise if God created man in his own image? There is a kind of theology which seeks to exalt the Creator by degrading the creature, which necessarily degrades both. If man is wholly externally determined he is less than an animal or a plant; no more than a clod. Moral character depends on self-determination; and man is robbed of his religious life if he cannot choose holiness rather than vice; God rather than Satan. The word man means a thinker, and he cannot even think without the power of self-determination. For all of which God is responsible; all of which he determined. And so I think Mr. Lindsey is correct, except in the fact that he feels the necessity of rejecting the truth of man's responsibility to save God's responsibility. He seems to think both cannot be true, and that he must choose between them. He cuts the Gordian knot by denying man's responsibility, and with an admission of absurdity pronounced man "wholly a passive being." Had he discerned the paradox he would have escaped the dilemma, to the credit of both man and God.

THE CHAMBERED NAUTILUS.

Prof. Tompkins's "Literary Interpretations" written for the Indiana Teachers' Reading Circle this year is a helpful treatment of the method for studying and teaching literature; especially helpful since it suggests to the reader a wider application than the author has given it in the selections he has chosen. As an example of such application the following poem is offered with the aim of showing that the simple or short selections in the readers do not differ essentially from the longer and more complex discourses which the author considers.

This is the ship of pearl, which, poets feign,
Sails the unshadowed main,—
The venturous bark that flings
On the sweet summer wind its purple wings
In gulfs enchanted, where the siren sings,
And coral reefs lie bare,
Where the cold sea maids rise to sun their streaming hair.

Its webs of living gauze no more unfurl;
Wrecked is the ship of pearl!
And every chambered cell,
Where its dim, dreaming life was wont to dwell,
As the frail tenant shaped his growing shell,
Before thee lies revealed—
Its irised ceiling rent, its sunless crypt unsealed!

Year after year beheld the silent toil
That spread his lustrous coil;
Still as the spiral grew,
He left the past year's dwelling for the new,
Stole with soft step its shining archway through,
Built up its idle door,
Stretched in his last found home and knew the old no more.

Thanks for the heavenly message brought by thee
Child of the wandering sea,
Cast from her lap forlorn!
From thy dead lips a clearer note is born
Than ever Triton blew from wreathed horn!
While on my ear it rings,
Through the deep caves of thought, I hear a voice that sings:—

Build thee more stately mansions, O my soul,
As the swift seasons roll !
Leave thy low vaulted past !
Let each new temple, nobler than the last,
Shut thee from heaven with dome more vast
Till thou at length are free,
Leaving thine outgrown shell by life's unresting sea !

—*Oliver Wendell Holmes.*

The aim in studying any production is to arrive at its meaning. The most pressing question is, what does it mean. The theme—the common element in the pupil and the poem—is the center toward which the energy of the student instinctively aims. This he must reach before he can find himself in the poem, before the two can become one.

The theme of this poem is soul growth in which we have revealed the nature of human life. Most productions of literature deal with some phase of spiritual growth, and ideally solve some struggle of the soul in realizing itself.

Thus, "The Vision of Sir Launfal" pictures charity triumphing over opposing forces; "To a Waterfowl" reveals the sublime faith of the world rising above temptation and doubt; "Maud Muller" shows us the soul rallying from regret for the past through hope for the future; and "Waiting by the Gate" sets forth ideal resignation in the presence of death. But "The Chambered Nautilus" is broader than any of the these. It is the poem of poems in the sense that it deals with the struggle which includes these lesser conflicts. Charity, faith, resignation and regret are but phases of the warfare between the real and the ideal, the nature of which is set forth in this poem.

This unceasing struggle between what the self is and what it desires to be, with its alternating periods of pleasure and pain, of freedom and bondage finds free expression in the life process of the Nautilus. For it, there is no resting place. It is continually passing out of the old into the new. As some one has said of man its life is by self abandonment; in order to reach a fuller and more perfect existence, yea, in order to exist at all it must burst the bonds of its narrow cell and build a palace which will in turn become a prison. And so year after year the little "tenant" struggles on from bondage to freedom and from freedom to bondage, revealing in its growth the truth expressed by Emerson: "Our whole life is but an apprenticeship to the truth that around

every circle another circle can be drawn; that there is no end in nature but that every end is a beginning; that another morn is always risen on mid-noon; and that under every deep a lower deep opens."

Discord in this poem is not so intense as in some. The tension in "The Courtship of Miles Standish" between inclination and duty, between the lower self and higher self, between the real and the ideal is much greater than here. There the battle waxes warm and forces itself upon the attention of the reader; here it is easily passed by unnoticed. In Standish a single conflict is prolonged and intensified; in the Nautilus there is constant relief, constant victory. In the former the struggle is against the downward tendencies of life, a battle of the soul against evil to hold its own. In the latter the soul, looking upward not downward, is reaching out from the finite to the infinite.

The author has idealized his theme, has removed it from the realm of possible attainment. The imperfect he has rendered perfect, and the transformation has changed the stern reality into a thing of beauty. The struggle as pictured here can find no exact counterpart in the life of mankind. The author has created an ideal development toward which the race may struggle but never reach. The Nautilus in leaving "the past year's dwelling for the new has done what man does not, and can not do."

He builds up the "idle door," stretches himself in his "last found home and knows the old no more." The triumph of the new life over the old is complete. But the soul can not close the door which leads from the lower into the higher life and through the opening it returns again and again to dwell in the old haunts. Whittier may at the call of duty command, "clasp angel of the backward look the golden covers of thy book" but all in vain.

University of Illinois.

J. E. MCGILVER.

[Continued.]

Do what you can,
Not what you cannot;
Not what you think ought to be done,
Not what you would like to do;
Not what you would do if you had more time,
Not what somebody else thinks you ought to do,
But do what you can.

PROGRAM FOR PATRIOTIC DAY.

NOVEMBER 6, 1896.

"One flag, one land, one heart, one hand, one nation, evermore."—O. W. Holmes.

1. FLAG SALUTE.....

(Pupils standing, repeat in concert.)

We give our heads and our hearts to God and our country! One country!
One language! One flag.

2. SONG..... America.

My country! 'tis of thee,
Sweet land of liberty,
Of thee I sing;
Land where my fathers died!
Land of the pilgrims' pride!
From every mountain side
Let freedom ring!

My native country, thee—
Land of the noble free—
Thy name I love;
I love thy rocks and rills;
Thy woods and templed hills;
My heart with rapture thrills,
Like that above.

QUOTATIONS:—

[Let each pupil rise at his seat and repeat one of the following sentiments.
Let there be no calling of names. It will thus appear voluntary.]

3. Gold is good in its place; but living, brave, patriotic men are better than gold.—*Lincoln*.

4. Patriotism is not the mere holding of a flag unfurled, but making it the loveliest in the world.—*W. J. Linton*.

5. I do love my country's good, with a respect more tender, more holy and profound than my own life.—*Shakespeare*.

6. "Shoot if you must this old gray head,
But spare your country's flag," she said.

—*Whittier*.

7. Be just and fear not;
Let the ends thou aimest at, be thy country's
Thy God's and truth's.

8. The patriot's boast where'er you roam,
His first, best country, ever is home.

9. We join ourselves to no party that does not keep step to the music of the union.—*Rufus Choate*.

10. We mutually pledge to each other, our lives, our fortunes, and our sacred honor.—*Jefferson*.

11. I know not what course others may take, but as for me, give me liberty or give me death.—*Patrick Henry*.

12. Thou, too, sail on O ship of state !
Sail on, O union, strong and great !
—Longfellow.
13. The God who gave us life, gave us liberty at the same time.—*Jefferson*.
14. Liberty and union, now und forever, one and inseparable.—*Webster*.
15. Of human things, nothing is more honorable or more excellent, than to be deserving of one's country.—*Cicero*.
16. Let us have faith that right makes might, and in that faith let us to the end, dare to do our duty as we understand it.—*Lincoln*.
17. It is well that in one year there comes one day, when the word is, and when the emotion is, our country, our whole country and nothing but our country.—*Webster*.
18. That we here highly resolve that these dead shall not have died in vain—that the nation shall, under God, have a new birth of freedom, and that government of the people, by the people and for the people shall not perish from the earth.—*Lincoln*.
19. Fling out the schoolhouse flag,
To freedom's breeze and sun,
Flag that cheered our Lincoln
And guided Washington.
20. We thank thee Great God, for this home,
This bounteous birthright of the free,
Where wanderers from afar may come,
And breathe the air of liberty.
21. We hail thee fair banner, the red, white and blue,
We'll be true to thy colors—forever be true.
22. The principle of free government adheres to the American soil. . . . Let the sacred obligations which have devolved on the generation and on us sink deep into our hearts. . . . There remains to us a great duty of defense and preservation. Our business is improvement. Let our age be the age of improvement.—*Webster*.
23. I am not worth purchasing, but such as I am, the King of Great Britain is not rich enough to buy me.—*Joseph Reed*.
24. Where was all this patriotism born? This love of country? From the mothers of the land, these courageous, liberty loving, patriotic young men have drawn their impulses. When our American motherhood becomes unworthy, the American Republic will perish.—*Benjamin Harrison*.
25. I only regret that I have but one life to give to my country.—*Isaac Hayne*.
26. ESSAY: Subject—Revolution, Causes, Cost in Money and Lives, Results.

27. RECITATION.....Paul Revere's Ride.
28. SONG.....Red, White and Blue.
29. INDIANA'S BATTLE-FIELDS:—Tippecanoe, etc. When,
Where, Commanders, Results.
30. SHORT STORY OF THE CIVIL WAR.....
31. RECITATION.....Sheridan's Ride.
32. SONG.....Battle Hymn of the Republic.
33. PAPER—Indiana Soldiers, Number Enlisted in State, Num-
ber and Some of Most Noted from Our Own County.
34. SONG.....Selected by Teacher.
35. SCHOOL IN CONCERT:—

Our flag is there, our flag is there !
 We'll greet it with three loud huzzas.
 Our flag is there, our flag is there !
 Behold the glorious Stripes and Stars.
 Stout hearts have fought for that bright flag,
 Strong hands sustained it mast-head high,
 And, oh to see how proud it waves
 Brings tears of joy to every eye.

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ADDITIONAL SELECTIONS FOR RECITATIONS.

- I. AMERICA TO HER BOYS.....

Where are my great men coming from,
 The men to rule the state,
 When this old Century left behind,
 We've passed the Twentieth's gate,
 My brave, broad-hearted citizens,
 The strong, the good, the true?
 You're drifting now, rouse up my boys!
 They all must come from you.
 Don't let past glories be forgot,
 Or patriotism die—
 Let every boy upon my roll
 Shout, "Ready, Here am I!"

—*The American Youth.*

2. SPEECH.....By Hon. E. O. Wolcott.

Mr. President, we will protect our country and our country's interests with our lives, but we wage no wars of conquest or of hate. This Republic stands facing the dawn, secure in its liberties, conscious of his high destiny. Whenever in all the world the hand of the oppressed or the downtrodden is reached out to us, we meet it in friendly clasp. In the old world, where unspeakable crimes even now darken the skies; in the Orient, where old dynasties have been crumbling for a thousand years and still hang together strong in the accumulation of infamies; in South America, where as yet the forms of free institutions hold only the spirit of cruelty and oppression—everywhere upon the earth it is our mission to ameliorate, to civilize, to Christianize, to loosen the bonds of captivity, and to point the souls of men to nobler heights.

Whatever of advancement and of progress the centuries shall bring us must largely come through the spread of the religion of Christ and the dominance of the English-speaking peoples; and wherever you find both you find communities where freedom exists and law is obeyed. Blood is thicker than water, and until some just quarrel divides us, which heaven forbid, may these two great nations of the same speech and lineage and traditions stand as brothers, shoulder to shoulder, in the interest of humanity by their union compelling peace and awaiting the coming of the day when "Nation shall not lift up sword against nation, neither shall they learn war any more."

3. WHO IS A PATRIOT.....

A patriot is a man who loves his country and is ready to fight for it. All our patriotic literature has the same ring, and so have the songs we sing. As a perpetual stimulus to this emotion, we have put the flag over all our schoolhouses, and have taught our children to salute it. What does it all mean, and what is to be the outcome of it all? The practical question is: Shall this sentiment of patriotism be allowed to expend itself in mere effervescence, or shall its energy be transmuted into useful work? Shall men and women be ambitious to be themselves the fathers and mothers rather than sons and daughters of revolution? In a word, shall our people be willing to live for their country while they are waiting to die for it?—Geo. H. Martin, Supervisor of Schools, Boston.

4. "OLD GLORY".....

Out upon the four winds blow,
Tell the world your story;
Thrice in hearts' blood dipped before
They called your name Old Glory!
Stream, Old Glory, bear your stars
High among the seven;
Stream a watchfire in the dark,
And make a sign in heaven!

When from sky to sky you float,
 Far in wide savannas,
 Vast horizons lost in light
 Answer with hosannas.
 Symbol of unmeasured power,
 Blessed promise sealing,
 All your hills are hills of God,
 And all your founts are healing !

Still to those—the wronged of earth—
 Sanctuary render.
 For hope and home and heaven they see
 Within your sacred splendor !
 Stream, Old Glory, bear your stars
 High among the seven;
 Stream a watchfire on the dark,
 And make a sign in heaven !

—*Harriet Prescott Spofford.*

5. THE AMERICAN FLAG

"That flag stands to us for a sentiment—for an institution. In itself, in the combination of colors that make it, in the hunting or silk of which it is made, there is nothing. It is what it stands for that makes it dear to us. It is something that lives in the heart; it is an enshrined sentiment that makes this flag, and it stands for a glorious history. We look upon that flag and we think of Bunker Hill; we see the gallant band expending the last charge of ammunition and battling with clubbed muskets over the breastworks and retiring at last defeated; yet, as some one said, Britain won the victory that day and we kept the hill. It speaks to us of Lexington and Concord, of Valley Forge, of Saratoga, of Yorktown, and all of those great achievements. We look upon it and think of Washington. We look again and see the benign face of Abraham Lincoln. We look again, and Grant and Sherman and Sheridan are revealed to us. We see upon its folds the story of Vicksburg and Chickamauga and Chattanooga, of Gettysburg and of Appomattox. It is this story that is woven into it that makes it precious to us; it is thus that it inspires. It is that for which it stands, a union of states, a government of the people, for they made it; by the people, for they conduct it; and for the people, for it has missed its object if it does not accomplish their good."—*Benj. Harrison.*

The above program was prepared by a committee of superintendents appointed at the superintendents' last state convention. The JOURNAL adds to what the committee has given a few appropriate selections. For still further selections and suggestions see the Patriotic Day program in the October JOURNAL for 1895. The date first selected for the celebration was the anniversary of the battle of Tippecanoe, Nov. 7; but as that date falls on Saturday the time has been changed to Friday, Oct. 6.

EDITORIAL.

ARBOR DAY.

State Superintendent Geeting has recommended that Oct. 30 be set apart as Arbor Day for the schools of Indiana, and he has placed a suggestive program together with many appropriate selections in the "Outlines for Township Institute Work." It is to be hoped that every teacher in the state—certainly every teacher outside the cities will observe the day and secure the planting of some shade trees. Let the trees planted be our own native trees rather than evergreens.

For still further selections and suggestions the reader is referred to the March JOURNAL for 1895, and to almost every volume of the JOURNAL for the past ten years. Special attention is called to the article on another page by John B. Peaslee on the history of Arbor Day connected with schools.

As Arbor Day and Patriotic Day come only a week apart it will be a little difficult to interest the public in two celebrations so close together. The JOURNAL suggests that in cases where teachers think it inexpedient to observe both days that the days be celebrated together. This could be done very appropriately. The trees planted could be named after the country's great patriots.

REDUCTION OF STATE SCHOOL TAX.

From very many quarters comes the statement, "Our school term for the coming year will be shorter than usual." This unfortunate state of affairs has been brought about in most instances because of the decrease of the state tax revenue. The state tax for school purposes has for many years been 16 cents on each \$100. When the law was passed a few years ago requiring property to be assessed at its full value, it was thought that this would increase the valuation so much that the rate might be reduced without lessening the amount of money for school purposes. The last two legislatures each *economized* (?) by reducing this state tax till it now stands at *eleven* instead of sixteen cents. The outcome of the matter is, that in many places the increase in valuation of property has not been enough to offset the reduction in the rate of taxation and the result is less money and shorter schools.

The state tax should be increased to its original standing. If this is not done, then the alternative is to increase the local tax. The schools must not be crippled.

REPORT OF THE COMMISSIONER OF EDUCATION FOR 1893-4.

The first volume of this report is at hand. It contains more than a thousand pages and is full of valuable information. Commissioner Harris studies as to what matters will be of value to the educational world and then he strives to put this matter in the best possible form.

The statistical tables cover almost every department of school work, and many of the living questions of the day are discussed by the ablest writers

on educational topics. The entire "Report of the Committee of Fifteen" is given together with a supplemental report by J. M. Greenwood, superintendent of the Kansas City schools, who was on the committee but dissented from some of its conclusions. Supt. Greenwood gives a number of lessons, (reported short-hand) actually given in his schools, to sustain his views in regard to the teaching of certain branches.

The history of public schools during the colonial and revolutionary period by A. D. Mayo, LL. D., occupies one hundred pages and is full of valuable information to any one interested in such historic study.

The papers on "The Psychological Revival" are by leading thinkers and are full of interest.

A short statement can give only a suggestion as to what the volume contains.

COUNTY INSTITUTES.

The county institute season is now practically over and the influence of the institutes held will manifest itself through the teachers on the schools. That the influence has been for good no one will doubt—that it has been for the greatest possible good no one will claim.

The contrast between the old-time institute and the institute of to-day is marked. The institute instructor of fifteen and twenty years ago gave almost exclusively academic instruction—the instructor of to-day does no academic work. The writer has visited thirty-two institutes the past season and has not heard an exercise in which the subject matter was the prominent thing.

Formerly, the main purpose of an institute was to give facts; now the main purpose is to give suggestion and inspiration. Formerly, the *what* was emphasized, now the *how* and the *why* receive most attention.

That the new is better than the old most will concede. There is a strong feeling among many that a happy medium would be better than either extreme. The writer is strongly of the impression that more detail work in which the common branches are used in the illustration of principles and methods would be a decided improvement on the present work.

Superintendents differ widely in the matter of conducting institutes. A majority engage two instructors and print the program in advance, and then follow the program with few variations. Some engage two instructors and allow them to make their own program from day to day. Most limit the time of each exercise and notify speakers when to stop. A few make no limit and allow instructors to talk *ad libitum*. A few engage three instructors, but most count the *third*, an unnecessary expense, as two can easily occupy all the time. Some begin early and work late with short recesses, while a few provide for only two exercises each half-day. The prevailing rule is to have three exercises each half-day.

Most superintendents take personal charge of the institute, appoint the secretary and all committees and in case of temporary absence name some one to take charge; while a few abdicate entirely, and allow the institute to appoint a presiding officer, a secretary and all committees.

Comparatively few have the minutes read. A great variety of plans are used in roll-call. A majority call by numbers to save time. In a few counties all the teachers of each township are required to sit together and the principal of the township keeps the record of attendance and reports to the superintendent. This saves the time of roll-call and stimulates township pride.

QUESTIONS AND ANSWERS.

STATE BOARD QUESTIONS USED IN AUGUST.

- READING.—1. Read a selection to the County Superintendent. 50%
2. Show how the subject of reading may serve to develop and strengthen the mind of the pupil. 10%
3. Illustrate, by using the word "hat," how the pupil may be put in condition to help himself in learning new words. 10%
4. When may the children begin to get thought from reading? Give example. 10%
5. Distinguish between primary and advanced reading. When in the course of study would literary interpretation properly come? 10%
6. (a) State fully the *extent* of the assignment of reading lessons in the second and third years, (b) What is the real purpose of the *oral* reading of a selection by the members of a class? 10%

- HISTORY.—1. What is history? What is the end in the teaching of history?
2. Give a suitable line of history work for second, third and fourth years.
3. Why is the Colonial Period so important? Politically, which is the most important idea of the Colonial Period?
4. Give a date which approximates the beginning of "the period of union for *national* life and growth." Give reason for date selected.
5. "Every great leader, every invention, every great movement, every new industry should be classified upon the basis of the institutional idea in it, and must be interpreted in the light of its influence on each of the great lines of growth."—State Course of Study. Discuss the above quotation.
6. Discuss the growth of the idea which resulted in the adoption of the Constitution. (Select No. 5 and any other four.)

- GEOGRAPHY.—1. How have water and ice assisted in bringing about the present condition of the surface of the earth?
2. How are deltas formed? Name three important deltas in the world.
3. To what causes is the long winter polar night due?
4. What geographical causes produce the difference between the South American Pampas and the Asiatic Steppes?
5. Why are the winds that strike the south side of the Pyrenees warm, moist winds, while those on the north are dry and cold?
6. What countries constitute the three great peninsulas of Southern Europe? Historically, which is the most interesting? Why?
7. "In the sixth and seventh years the aim of geography * * * should be the study of man in the various parts of the globe, living in different

zones, surrounded and affected in his institutional life by different climatic conditions, mountains, plateaus, valleys, oceans and inland waters."—State Course of Study. Discuss the above. (*Select No. 7 and any other four.*)

PHYSIOLOGY.—1. What is a tissue?

2. Name the three largest excretory organs.

3. How is sound produced?

4. What is the function of the crystalline lens?

5. What is the function of the sense of taste, and what are its organs?

6. What is an automatic center? Give example.

7. What is the chief source of the heat of the body?

8. How does alcohol in small doses affect the nervous system?

(*Any five.*)

GRAMMAR.—“The cause of American Independence was now to be presented to the world in such a manner as to engage its sympathy, to command its respect, to attract its admiration.”

1. Give the entire subject of the above sentence; the entire predicate.

2. Select the adjective phrases; state case of each noun, and give the principal parts of the verbs used in the above sentence.

3. Give synopsis of the verbs “ring” and “caught” in the third person, singular, subjunctive mood.

4. Define grammar as a science; as an art.

5. “The *marks of a good definition* are three.

1. Name the thing defined.

2. Put it into the smallest known class.

3. Give the marks or characteristics of it which set it off from all other members of that class.” Observing the “marks of a good definition,” define noun, adjective, pronoun, and verb.

6. Define a clause. Define a principal clause. Define a subordinate clause.

7. Compare and contrast synopsis and conjugation. (*Any six.*)

ALCOHOL AND NARCOTICS.—Write a composition of 300 words on the subject of Alcohol and Narcotics, discussing:

1. The physical effects.

2. The moral effects.

THE TEMPEST.—1. Near the close of Act III Ariel says:

“I and my fellows are ministers of fate,” etc.

With the text before you, quote any lines that seem to you to teach the doctrine of repentance as a means of freeing one's self from the effects of his evil deeds.

2. Read carefully the last utterance of Alonzo in Act III, beginning:

“O, it is monstrous, monstrous!

Methought the billows spoke and told me of it,”

and tell what state of mind is here expressed. Find other passages bearing upon your answer.

3. What view of the family as an institution of society does Prospero set forth, especially in the first part of Act IV?

4. What is the significance of the great pageant which Prospero provides after the union of Ferdinand and Miranda?

SCIENCE OF EDUCATION.—1. Define apperception.

2. How is apperception different from perception?

3. Show that, logically, all perception involves apperception.

4. An ignorant, illiterate man and a great botanist both look at a plant, perceive it with equal clearness. Which would have the larger and richer apperception of the object, and why?

5. What do you consider the true aim of object lessons in the school?

6. Do you see any important distinction between apperception and association; and if so, what?

7. To acquire new knowledge is to know something new in terms of that which we already know. Does this involve the principle of apperception? Explain.

8. In what sense will one's previous perceptions and apperceptions determine what he will see and give his attention to when surrounded by an environment relatively new? *(Select No. 8 and any other four.)*

ARITHMETIC.—1. Discuss the idea and respective relations of cent, nickel, dime and dollar, and \$1.00, \$2.00, \$5.00 and \$10.00 bills, as to a pupil ready for such work.

2. At what time in the course of study should the pupils be given some practice in making and receipting bills? Indicate such a bill as you would use, and also the grade to which you think it applicable.

3. Through what observation and question would you lead a pupil to the discovery of method for finding the area of a rectangle, a right angled triangle? Indicate.

4. An irregular piece of land, containing 540 A., 36 sq. rd., is exchanged for a square piece containing the same area. This was divided into 42 equal squares; what was the length of the side of each?

5. What is the difference between the simple interest and the bank discount of \$450.00 at 5 % for 6 years and 10 months?

6.

PRIN.	RATE.	INT.	TIME.	AMOUNT.
?	5	?	2 yr. 3 mo. 10 da.	\$1,893.61½
\$9,750.00	12	\$780.00	?	?
\$1,700.00	?	10.58	28 days.	?

7. Find the cost of three pieces of timber, each 26 ft. long and 6 in. by 9 in., at \$1.75 per hundred board feet.

8. What will it cost to gild a 14-inch cube at 4½ cents a square inch?

9. A man owes a debt of \$6,400.00 due in 8 months. By paying it now he will be allowed 5 % off, and he can borrow this money at 5 % per annum. How much may be gained by borrowing this money to pay the debt?

(Any eight)

ANSWERS TO PRECEDING QUESTIONS.

ARITHMETIC.—1. To any one, the idea of "cent" is what it makes the mind think of when the word is seen or heard. The hundredth part of a dollar is one idea of cent as to value. The idea of each coin or bill is one of value to a certain amount. Their relations are easily presented. A paper dollar is a promise by the government to pay one dollar in coin, to the holder, on its presentation. Other bills are similar in character and import.

2. Pupils beginning the fourth reader grade are ready to take instruction in bills of a simple direct nature. The proper kind would be such as are made at the grocery or provision stores; the elements constituting them should not be too large or intricate.

3. The unit should be one of square measure. If the dimensions are given in inches, the square inch is the unit. Ask how many square inches can be placed along the side. The pupil should be led to observe the number of square inches in a row along the side, and also the number of rows. Next, ask how many square inches in all the rows.

Complete the rectangle from the right triangle, and lead the pupils to see that the triangle is half the rectangle.

4. Impossible; the piece to be divided is a *square*, and therefore lines can not be run so as to divide it into 42 equal squares.

5. Both are simple interest; hence, there is no difference unless a difference in result should be caused by using the days of grace in getting the bank discount. The "simple interest" is \$153.75; the "bank discount" is $18\frac{3}{4}$ cts. more.

6.—

PRIN.	RATE	TIME	INT.	AMT.
(\$1700.00)	5	5 yr. 3 mo. 10 d.	\$193.61 $\frac{1}{2}$	\$1893.61 $\frac{1}{2}$
\$9750.00	12	(8 mo.)	\$780.00	\$10530
\$1700.00	(8 +)	28 d.	\$ 10.58	\$1710.58

7. $2\frac{1}{2} \times \frac{1}{2} \times \frac{2}{3} \times \frac{1}{100} \times \frac{1}{4} \times \frac{2}{3} = 6.14\frac{1}{4}$; hence, the cost is \$6.14 $\frac{1}{4}$.

8. Answer, \$52.92.

9. \$6400 — (5% of \$6400) = \$6080; should this amount be borrowed at 5%, in 8 mo. the debt (amount) would be \$6282.66 $\frac{2}{3}$. \$6400 — \$6282.66 $\frac{2}{3}$ = \$117 $\frac{1}{3}$, gain by borrowing.

SCIENCE OF EDUCATION.—1. See "McMurray" page 181, for several definitions. Apperception is reading the new knowledge in terms of the old.

2. Perception, in its wide sense, means the cognition of fact or truth in general, and embraces the whole process from the presentation of the knowledge elements to their complete assimilation. Apperception takes these elements after they have been presented to the mind and re-organizes them on the basis of the old, preparatory for assimilation.

3. (See 2.) Apperception is one of the processes by which we are made capable of complete perception.

4. Certainly the botanist would have the larger and richer apperception of the plant, because he is familiar with its life, its parts and their functions, its characteristics, its relation to others of its kind. His store of botanical knowledge is such that he has great power of reading the new plant in terms of others that he knows. The other person will apperceive nothing of the kind, because he has no "apperceptive basis" that fits the botanical kingdom.

5. To aid the mind in forming a mental picture, or in understanding a truth or a principle by furnishing a concrete basis upon which to construct the idea, or series of ideas.

6. Association is simply the bringing together of the ideas related; apperception does much more—it weaves them into a unity.

7. Certainly; this coincides exactly with the process of apperception. The old ideas receive the new idea to modify and appropriate it; the old ideas have a permanent place in our thoughts, and are used to acquire an insight into new things—we see the new things by the light given us by the old ideas.

8. When we see any new thing, we begin to ransack our old experiences and classifications to find out what is like it or has any analogy to it, or whether it serves the same purpose; for in this way we discover an explanation of the new objects that appear to us.

GRAMMAR.—1. The entire subject is, "The Cause of American Independence;" the remainder of the sentence constitutes the entire predicate.

2. The adjective phrase is "of American Independence." (The remainder of the answer contains no difficulty).

3. Present, (if) he ring; past, (if) he rang. Present, (if) he catch; past, (if he caught).

As a *science*, it deals with the constituent parts of sentence structure; with the laws and principles which underlie sentence structure.

As an *art*, it deals with the laws and usages which determine correct language, such laws and usages as will enable the student to express his thought successfully.

5. A *noun* is a substantive that names the object of thought. A *pronoun* is a substantive that is used instead of the name of the object of thought. An adjective is an attributive word used to express an attribute of an object. A verb is a word used to affirm something of a subject.

A *clause* is part of a sentence, consisting of a proposition, or two or more propositions grammatically combined. A *principal clause* is one having one or more clauses modifying or forming some part of it. A *subordinate clause* is one used to modify a principal clause or form some part of it.

7. The *conjugation* of a verb is the expression, in regular order, of its voices, modes, tenses, persons, and numbers. The *synopsis* of a verb is an orderly collection of the forms of a single person and number of all the modes and tenses.

HISTORY. 1. History is a record of what the human race has achieved in the past. It is taught to the child that he may become a good and pa-

triotic citizen; and that he may become ambitious, cultured, and cosmopolitan.

2. See "State Course of Study."

3. The colonial period is important because it is the period of growth and development of those ideas and principles which are afterward to become permanent and national. Politically, the most important idea of this period is that of local self-government.

4. In 1643, the New England colonies formed a kind of loose confederation for protection against Indians. In 1754, there was a plan of Union discussed at Albany by commissioners from every colony north of the Potomac; and there was one Virginian among them. Benjamin Franklin was the controlling spirit. (By some, this date is given as the beginning of a political union of the colonies.) In 1765, we have the Stamp-Act congress. In 1774, the first continental Congress. Of these, Woodrow Wilson says: "In none of these steps was there any creation of organic union; that was to be the result of slow process, and was to be effected only by the formation of an entirely new body of law." "The colonies can not be said to have framed any federative constituent law until 1777, when the Articles of Confederation were drawn up."

5. Through the betterment of the home, the church, the school, the state, and business life, civilization progresses. These forces combined constitute the great force at work upon the individual and upon society. Hence the standard by which we should judge of the value of every man or measure should be the influence any of them has had upon any one of these lines of growth.

6. It was the weakness of the confederation; its "executive impotency" which led to the formation of the constitution. Jealousies and other difficulties among the states speedily made it evident that "both for the sake of internal order and of inter-state peace and good will, a real central government was needed."

READING. 2. Strength and development are secured by *activity*, whether in mind or muscle. In reading, the mind is putting forth effort to grasp the ideas singly; collectively as to their dependence and relation to each other; and understandingly in their relations to the ideas already stored in the mind. This constant effort to realize the ideas embodied in the symbols brings about such a variety of relations, and utilizes so much of the mind's previous knowledge, that the mind is most thoroughly exercised in its efforts to assimilate; and this systematic exercise strengthens and develops the mind.

3. See the first part of almost any first reader. In the illustration use several words, as,—rat, mat, cat, bat, etc., and cause the pupil to see that these words contain the sound indicated by *at*, and that the variation is caused by the different letters which may precede it.

4. This depends upon the simplicity of the ideas, or the kind of thought embodied in the symbols; the thought in the little narratives in the first reader is grasped by the pupils using that reader. From some of the selec-

tions there may be derived ideas of right action and wrong action. These and their distinctions, in an elementary way, are comprehended by very young pupils.

5. In primary reading the pupil finds in the forms ideas which are in his mind. The subject matter is so selected that the forms may be easily acquired. As the pupil grows older, the subject matter, by degrees, contains more and more new knowledge. In advanced reading the pupil studies the forms to get ideas which are not in his mind. Interpretation in some degree, may begin as early as the third reader grade.

6. (a) The assignment should be such that the whole selection would be worked over. This may involve only one line of thought, or one feature or phase of the lesson; or it may consist of two or more. The nature of the selection will determine the amount of work to be assigned, but rarely, if ever, is it proper to assign only a part of a selection, unless that part has, itself, unity in it.

(b) To develop power and skill in oral expression, and to test whether or not the reader understands the meaning of the selection.

GEOGRAPHY.—1. Water and ice have assisted in bringing about the present condition of the surface of the earth by disintegrating the materials of the earth's crust, and transporting the particles to various parts. In this way soils have been formed, and many of the valleys and hills. Water, whether by rain or river, causes erosion, and thereby the surface of the earth is much changed by the wearing away of banks and hills, and the transportation and deposition of sediment.

2. Deltas are formed (when the conditions are favorable) by the deposit of sediment by a river at its entrance into a large body of water. Three important deltas are those of the Mississippi, the Nile, and the Ganges.

3. The earth's axis is *not* perpendicular to the plane of the ecliptic, but makes an angle with it of $66\frac{1}{2}$ degrees. The earth's axis is inclined $23\frac{1}{4}$ degrees from a perpendicular position. This inclination and the revolution of the earth round the sun cause the long winter polar night.

4. The difference in the size and elevation of the land masses; also the difference in the conditions that bring about rain-fall, which in the pampas is abundant at a certain time of the year.

5. The only winds striking the south side that are warm and moist are those coming diagonally from the Mediterranean, from which they bring their moisture. Others that come from a due southerly direction are dry, as they pass over a dry and elevated interior, which continually increases in elevation towards the north. On the north side the winds are cool and moist, coming from Biscay Bay.

6. (a) Spain and Portugal. (b) Italy. (c) Greece. Italy is the most interesting because it was the center of the Roman Republic and the Roman Empire, which for several centuries was "mistress of the world."

7. Under different conditions of climate, in different zones, and with different environment, man becomes a very different being. In these grades, the aim should be to lead the pupil to see how greatly man is influenced in

every way by his physical environment. He should be led to see that where this is favorable and invigorating, there man develops strongly in ideas and institutions, etc.

PHYSIOLOGY.—1. A tissue is one of the elementary forms of structure that make up the material of an organ.

2. The lungs, the liver and the kidneys.

3. By atmospheric vibrations coming in contact with the auditory apparatus.

4. To assist in refracting the rays of light.

5. To discover the savors of the different substances which are presented to the organs of taste; these are the tongue, the soft palate and its arches, the uvula, the tonsils, and probably the upper part of the pharynx.

6. An automatic center is a nerve center which has the power of originating and conducting nervous impulses independently of a previous reception of a stimulus from another part. An example of automatic action is that performed by the respiratory center.

7. The oxidation of the tissues.

8. The question is indefinite as to the number of doses and the intervals between them. If one dose is given the nerve centers are unduly excited and there is an exhilaration of feeling. After a short time, the system slows down to a point much below the normal condition, and from which it takes several hours to recover. The process repeated every day would in time destroy the delicate sense of the nerve extremities, and in time would produce partial paralysis.

TOWNSHIP INSTITUTE OUTLINES.

GUIZOT'S HISTORY OF THE CIVILIZATION OF EUROPE.

TEST-WORK :—NOTES, TOPICS, AND QUESTIONS,
FOR USE AT TOWNSHIP INSTITUTES.

LECTURE III.

(The figures refer to pages in the book itself.)

I. The primary elements of European civilization (44, 52, 53, 54, 57, 58).

The various elements of our civilization (64); what each would have us believe; what each author has asserted (65); give examples; the extent of these "irreconcilable pretensions" (66 ; two facts revealed; the aim of each element, (67).

11. *Political legitimacy*:—What is it? (67; 70, N); governments claiming it (67, 68); its wide prevalence, 67; discuss *force* as its origin (68, 69); the "true foundation" or origin (69, 70 and 70, N); man's inherent tendency toward reform (69, 81); discuss the duration of human society (69); the condition at the epoch under discussion.

III. *Political legitimacy*:—How it has become established (70, 71); the various ideas and systems to which it may be attached; the American theory (70, N); how governments established by force may justify their lawfulness (70, N); what this dispute reveals as to the true character of the period of barbarism (71).

IV. *The dark age*; the four classes of persons, (72); changing from class to class (72, 73); how possessions were distinguished (73 and 73, N); the beginning of the right of inheritance as applied to benefices, (73, N); the author criticised (73, N); the condition of institutions (74); the chaos in regard to states; when it is closed: Discuss the causes of this unsettled state of society (75, 76, 77, 79, 80). Invasions from the desire of "spoils;" from "necessity" (75); objects of the Saracen invasion (76); a questionable statement (76, N). State of Mohammedan civilization; the cause (76, 77). Describe the state of interior Europe during this period (77); characteristics of the Saracen invasion; of the Germanic invasions.

V. Discuss—"It is man himself who makes our world." The ideas that make a society possible (79); when a failure would result (80); show that Europe at this epoch was an example; give the character of the German invaders (81, N); why they could not take advantage of the situation, and progress (80 and 81, N); review briefly the two causes which kept our forefathers in a state of barbarism.

VI. Causes tending to draw them out of this state of barbarism: (1) an inborn desire for improvement (81); (2) "fragments of Roman civilization" (an image from the past) (82); (3) influence of the Christian church; (4) influence of great men (82, 83).

VII. Attempts at reform:—

1. *The compilation of barbarian laws*; why this could effect but little (83, 84);

2. *A revival of municipal institutions* (84); Roman laws collected (84); what they comprehended (84, N).

3. *Legislation through the power of the Church, by the Visigoths*, (85); their legislation compared to that of the barbarian; one peculiarity of barbarian legislation, and why (85 N). A great principle in the legislation of the Visigoths (86); their superiority in judicial proceedings; the general nature of their code. Its authors.

4. *The efforts of Charlemagne* and other great men; the leading object of his life (86, 87); how he was occupied during his reign (87). Elements he tried to introduce; to remove (how?). The leading characteristics of his reign (87, 88); conspicuous proofs; why these attempts failed (88).

VIII. Two results obtained (88, 89); why land invasions ceased (89); result of invasions by sea.

A change in the kind of life led; formation of certain societies and states; the beginning of feudalism (90); the prevailing element,—why so; the origin of the feudal system (90, N).

IX. How the Frankish system became stable (91). Charlemagne: his two motives (92); why they could not be realized; his empire divided; chaos again; why political order progressed slowly (93); what was to precede it (93).

Suggestions:—Let some member of the Institute give a sketch of "Charlemagne"; let another member give a brief account of the Saracen invasion; and another give a sketch of the "barbarian." These should not be more than five minutes in length.

NOTES.

The period intervening between the fall of the Western Roman Empire (476) and the discovery of America by Columbus (1492), say from the fifth to the fifteenth century, is usually spoken of as the Middle Ages, or more concisely as the Middle Age. It is marked by many and great events, such as the institutions of feudalism and chivalry, the growth of municipalities, the crusades, the rise of the papal power, the invention of printing, the revival of learning, maritime discovery, etc.—*C. G. Wheeler*.

The first five centuries of this period, say from the fall of Rome to the year 1000, are often known as the Dark Ages. *Id.* Writers innumerable have declaimed on the night of the Middle Ages; on the deluge of barbarism which, under the Goths, flooded the world; on the torpor of the human intellect, under the combined pressure of savage violence and priestly superstition, yet this was precisely the period when the minds of men, deprived of external vent, turned inward on themselves; and that the learned and thoughtful, shut out from any active part in society by the general prevalence of military violence, sought, in the solitude of the cloister, employment in reflecting on the mind itself, and the general causes which, under its guidance, operated upon society.—*Alison*.

The Dark Ages, as the period of Catholic ascendancy is justly called, do undoubtedly display many features of great and genuine excellence. In active benevolence, in the spirit of reverence, in loyalty, in coöperative habits, they far transcend the noblest ages of pagan antiquity, while in that humanity which shrinks from the infliction of suffering, they were superior to Roman, and in their respect for chastity, to Greek civilization. On the other hand, they rank immeasurably below the best pagan civilizations in civic and patriotic virtues, in the love of liberty, in the number and splendor of the great characters they produced, in the dignity and beauty of the type of character they formed. They had their full share of tumult, anarchy, injustice, and war, and they should probably be placed, in all intellectual virtues, lower than any other period in the history of mankind.—*Lecky*.

In the next place, the great lesson which the Dark Ages exhibit is also that which human life is unhappily at every moment and on every occasion exhibiting—the abuse of power. The great characteristics of the Dark Ages are the feudal system and the papal power.—*W. Smyth*.

Literature, science, taste, were words little in use during the ages which we are contemplating; or, if they occur at any time, eminence in them is ascribed to persons and productions so contemptible that it appears their true import was little understood. Persons of the highest rank, and in the most eminent stations, could not read or write. The human mind, neglected, uncultivated, depressed, continued in the most profound ignorance.—*Robertson*.

PEDAGOG.

GRAMMAR.

I. Definition.

1. Nature of, as (1) a process, (2) as a product.

a. Names the thing defined.

b. Puts it into the smallest known class larger than itself.

c. Sets it off from all others in that class by giving a unifying attribute.

II. Quality of.

a. To be good, a definition must be:

- 1¹. Logical.
- 2¹. True.
- 3¹. Helpful.
- 4¹. Inclusive.
- 5¹. Exclusive.

III. The relation of the subject of definition to the subject-matter, purpose, and steps in grammar.

IV. The educational value of definition.

Developing definitions is so important a part of the grammar work that the method of it calls for careful consideration. Definition may be viewed as a process or product. It is, however, with definition as a process that the teacher is primarily concerned, for it is well known that merely to commit definitions to memory that some author has worked out and placed in a text-book is of little or no educational value, and that it is not only the poorest kind of grammar teaching, but in most cases is positively injurious, as it deadens the learner's natural appetite for knowledge and gives him an antipathy for grammar.

Definition may be broadly stated to be a mental process—the process by which the mind thinks the content of a general idea. By content of a general idea is meant the sum of the attributes possessed by each of a number of particulars. The content of the general idea man is the attributes, sensation, mammalian structure, upright posture, moral sense, etc., that are found in each individual.

Definition, whether viewed as a process or a product, if logical, must do three things, viz.: 1. Must name the thing defined. 2. Must put it into the smallest known class larger than itself. 3. Must set it off from all other things in that class by giving a unifying attribute. In the definition, "A Triangle is a plane figure bounded by three straight lines," "A Triangle" names the thing to be defined; "is a plane figure" throws the thing to be defined into the smallest class larger than itself; "bounded by three straight lines" sets it off from all other things in that class by giving a unifying attribute. Many errors are made with respect to points "2" and "3." Of the definitions in our ordinary text-books of grammar fully three-fourths are faulty at these two points. Take the definition, "A Noun is the name of an object," and subject it to a test. The thing to be defined is thrown into the class of names, a class just as large as itself; for there are no nouns that are not names and no names that are not nouns. It is absurd to add "of an object," as if there were names that are not the names of objects. Such attempts at definition as the above are sometimes called defining in a circle, and are to be carefully avoided. One could say that a noun is a name, and that a name is a noun, and go round and round without ever obtaining any help from such a process. From the above it appears that it will not do merely to say for point "2" that a definition puts the thing defined into the smallest known class. In the above "a name" is very probably the smallest known class; but proceeding thus, the third step of the definition could never be taken.

An examination of the definition for person, "Person is that property of the noun or pronoun which distinguishes the speaker, the person spoken to, or the person or object spoken of" shows that in taking the third step the author, instead of giving a unifying attribute, gives classifying attributes, thus violating a law of logical definition.

From the very nature of definition, since it is thinking the common attributes of a class of objects, it appears that it must be inclusive and exclusive; *i. e.*, it must include all the particulars of the class. Otherwise, it would not be thinking attributes common to all the individuals; also, it must exclude all things not belonging to the class, for if it did not, it would not be thinking attributes common to just the class defined, and would cease to define at all. To say that "The subject of a sentence names that of which something is thought" is not sufficiently inclusive, because it excludes all pronouns used as subjects of sentences, for they do not name. To say that "An Adjective is a word that modifies a noun" is not to make the definition exclusive, because it includes the appositive and possessive, for they both may modify nouns.

It was noticed in lesson one on grammar in this outline that the subject-matter of grammar is the sentence viewed as a whole, and also viewed as to its parts, these with respect to relation, classification, and definition. Now, after relations have been worked out and classifications made, the final step is the defining of the classes. It is the thinking of the particular and universal attributes of the thing defined. Thus, definition is truly a process by which the mind comes into possession of an essential part of the subject-matter of grammar, *i. e.*, the relation the facts are to be thought in. It was also stated that the purpose of grammar was primarily mental discipline. In developing definition the mind must observe the particulars carefully; it must select the attributes, both common and individual, then discriminate between them; it must draw away the common attributes and hold them in mind abstracted; it must generalize by binding all the individuals there are into the common unity of the general idea. Thus, in definition, the processes of observation, discrimination, abstraction, and generalization are carried on and cultivated. The whole process is reasoning from particulars to the general, and is thus inductive reasoning. So, what developing definitions does for the learner is identical with the purpose of grammar.

On the educational value of definition the following, from Tompkins's *Philosophy of Teaching*, is excellent: "It is a process of thinking which brings into unity the individual and the universal—the problem of all thought, and which brings the learner into unity with the world of thought, the end of all learning. This is its primary educational value.

"The power to discern unity in the midst of diversity; to detect essential likenesses amidst engrossing and non-essential differences; to find the enduring under the mask of obtruding, accidental, and superficial attributes is a fundamental characteristic of every well-trained mind. To define is not simply to unify individuals; but, in unifying, to find their essential nature. The common nature in which they are unified is the essential nature of each individual. Hence the habit of thinking in the form of definition is the habit of thinking the true nature of things, which is the primary function of mind."

[GEO. W. NEET, Spiceland, Ind.]

ARITHMETIC.

I. Subject-matter.

1. The subject-matter of arithmetic is the number series as to the relations and properties of its numbers.

II. Purpose.

1. The careful cultivation of the powers of observation, discrimination, generalization, abstraction, inductive reasoning, deductive reasoning, and identification.

2. *To develop in the child a new power of thought by which he may grasp the world of quantity "in the operation of making a vague whole definite."*

III. Steps.

1. The series of lessons involved in mastering the numbers from one to one hundred.
2. The series of lessons involved in mastering the fundamental processes, and the principles of each.
3. The series of lessons involved in the applications, as percentage, etc.

IV. The scope of the work for first and second years respectively.

1. First year.

- 1¹. Numbers from 1 to 10 inclusive. Each is to be dealt with:
 - 1². As a whole;
 - 2². As to the relations in it;
 - 3². As to its appropriate fractional parts;
 - 4². As to its applications.
 - 1³. Denominate.
 - 2³. General.

Questions.

1. Would you teach any symbols this year? Why?
2. With what number would you begin teaching? Why?

Note.—"It is clear that to promote the natural action of the mind in constructing number, the starting point should not be a single thing or an unmeasured whole, but a group of things or a measured whole."—Psychology of Number, by McLellan and Dewy.

2¹. Second year.

- 1². Notation of numbers from 1 to 10, inclusive.
- 2². Numbers from 11 to 20, inclusive. Each is to be dealt with:
 - 1³. As a whole;
 - 2³. As to the relations in it;
 - 3³. As to its appropriate fractional parts;
 - 4³. As to its applications.
 - 1⁴. Denominate.
 - 2⁴. General.
- 3². Notation of numbers from 11 to 20, inclusive.

V. Relation of work in first and second years to the subject-matter, purpose, and steps in arithmetic.

Method in arithmetic is the mental process by which the mind of the learner identifies itself with the subject-matter of arithmetic. When it is

said that the subject-matter of arithmetic is the number series, it is meant that arithmetic deals with the numbers from one to infinity. The numbers from one to infinity are sometimes called the number continuum, and it is thus the number continuum that is the subject-matter of arithmetic.

It seems unnecessary to show the disciplinary value of arithmetic beyond saying that it is evident that there must be careful observation in the development of principles as well as in the application of these principles to particular solutions; and that discrimination is cultivated by the careful comparison and contrast of processes, as in the discovery of likenesses and differences of such processes as division and ratio. When the learner is led to see from the examination of particulars that multiplication is the process of finding a number that bears the same relation to the multiplicand that the multiplier does to one, he has exercised his powers of abstraction, generalization, and inductive reasoning. When the learner discovers that a problem is one of multiplication, division, etc., he has taken a step in the cultivation of the power of identification. When the application of an established principle is made to a particular problem, the process is that of deductive reasoning, and that power of the mind is accordingly exercised.

But while we are giving the child the mental discipline indicated above, we may exercise his mind upon material such as he could not well do without in the pursuit of a happy and successful life. This is the practical phase of the purpose, and it is practical in the true sense. Vagueness means bondage. The world of quantity manifests itself to the child in vague wholes. It is by the mastery of number that the child is enabled to make vague wholes of quantity definite to his mind. So to give the child this power of thought over quantity is a prime purpose of arithmetic.

It is thought that if the child masters the numbers from 1 to 100 that he will have mastered number genesis, number classification, and number representation, then there remains the fundamental processes with their principles to be mastered; also the applications in percentage, ratio, mensuration, etc. These series of lessons seem to cover all the ground of mathematics that would properly fall into the realms of arithmetic.

The scope of the work indicated in the outline is just such as almost every primary teacher in number has been doing in Indiana for several years. Experience shows that a *mastery* of the numbers from 1 to 10 makes a good, strong year's work. A brief discussion will show how the numbers are to be dealt with. The child knows the number as a whole, when he knows it made up of so many 1's and as made up of the first number below it and 1; thus the child knows the number 6 as a whole when he knows it as made up of six 1's and as composed of 5 and 1. The child knows the number 4 as to the relations in it when he sees the following:

- | | |
|---------------------|--------------------------|
| 1. Three and one. | 7. Four divided by two. |
| 2. One and three. | 8. Two twos. |
| 3. Four less one. | 9. Four less four. |
| 4. Four less three. | 10. Four divided by one. |
| 5. Two and two. | 11. Four ones. |
| 6. Four less two. | |

In dealing with a number as to its appropriate fractional parts, the pupil is to be led to apply the proper term to each part. The pupil is then to see and state the relation of the fractional numbers to one another and to the whole.

Illustration with the number 3:

1. $\frac{1}{3}$ of 3 and $\frac{1}{3}$ of 3 and $\frac{1}{3}$ of 3 are 3.
2. $\frac{2}{3}$ of 3 and $\frac{1}{3}$ of 3 are 3.
3. $\frac{1}{3}$ of 3 and $\frac{2}{3}$ of 3 are 3.
4. 3 less $\frac{1}{3}$ of 3 are $\frac{2}{3}$ of 3.
5. 3 less $\frac{2}{3}$ of 3 are $\frac{1}{3}$ of 3.
6. 3 less $\frac{3}{3}$ of 3 are 0.
7. $\frac{3}{3}$ of 3 are 3.
8. $\frac{2}{3}$ of 3 are 2.
9. Etc.

In dealing with a number as to its denominate applications, the children should be taught concretely all the units of the tables involving the number. They are as follows with the number 3:

1. Three feet are one yard.
2. Three feet are one pace.
3. Three miles are one league.
4. Three one-cents are three cents.

General applications may be carried as far as the teacher thinks beneficial. Illustration: The triangle has three sides. The stool has three legs. The script letter *m* has three left curves.

It may be stated here that the mastering of one number before proceeding to another is condemned by McClellan and Dewy on the ground that it is not the mind's natural mode of procedure in acquiring number ideas. The Grube method is severely criticised.

Some prefer to leave the teaching of symbols till the second year, fearing that the child may get the idea that the symbol is the real number instead of merely the representation of the number. However, it is pretty well established that the mind naturally seeks a symbol for its idea as soon as it has one. There are some grounds for argument on both sides.

If the quotation be true, and it seems to us that it is, it is evident that the number to begin with is 2 or 3 and not 1 (if we are to regard 1 as a number at all).

Since the work in the second year is to be dealt with as the work in the first year, it is not necessary to discuss it.

[GEO. W. NEET, Spiceland, Ind.]

LITERARY INTERPRETATIONS.

What the poet handles as his theme is not his own personal property; it is the inheritance of all mankind. He is entitled to no experience that does not legitimately belong to any other man. "The poet is more myself than I am." / is the man who lives in a hovel, or the one who dines with kings. It is the servant and also his lord. It is the one who gives the widow's mite, and he who builds a temple. It is both Dives and Lazarus. It is the heathen mother who throws her child into the Ganges, and the Chris-

tian mother who thinks of Him as she sings the evening lullaby. Whatever of life the poet may know must find a response in these. His theme is not limited by time or place. It is of all times and of all climes. The poet can no more copyright a theme than Newton could have taken out a copyright on gravitation. It is universal and he must lay claim to it in common with mankind.

But the poet lives in rich spiritual experiences, which the rest of us feel are ours, too, by right; yet he has the sooner come into the possession of the inheritance. The life he sets forth is a criticism on ours. He holds out in perfection the same thing we embody in ourselves in imperfection. The loves, the sympathies, the struggles he gives are our own loves, sympathies, and struggles intensified unto perfection, which, when we have felt the intention, makes the poet's theme ideal to us. But it is nevertheless ours.

The poet's message, however, does not arise out of immediate consciousness of the philosophy of life. His experiences do not grow out of cold, calm reasoning, but well up out of a warm heart. The head seems rather to steady the heart that it may rise the higher and remain the longer on the wing. The poet will not confess to having logically thought out his poem. It must come to him, and take possession of him. He can not go to it. Longfellow in his journal mourned that the inspiration to write had not come upon him "this fall as it did last." Holmes makes his poet express it thus: "A lyric conception hits me like a bullet in the forehead. I have often had the blood drop from my cheeks when it struck, and felt that I turned white as death. Then comes a creeping as of centipedes running down the spine, then a gasp and a great jump of the heart, then a sudden flush and a beating in the vessels of the head, then a long sigh, and the poem is written. Not an impromptu. I said written but I did not say *copied*. Every such poem has a soul and a body. The soul of it is born in an instant in the poet's *soul*. Whether it will ever embody itself in a dozen stanzas is uncertain; but it exists potentially (essentially) from the instant the poet turns pale with it."

This is not a recipe. It is Holmes's way of saying that the heart of the poet must have a volcanic eruption. He must boil over. The poet feels an inner impulse from the "vast unknown"—the unfathomable depths of the heart.

"Voices pursue him by day,
And haunt him by night,
And he listens and needs must obey,
When the angel says, 'Write!'"

Every soul must have a body through which it manifests itself. It must show itself in a concrete form. The head may talk somewhat in the abstract now and then, but the heart never does. It must give a body to suit the feeling.

As the heart speaks in types, the form in which the poet bodies forth his message must be as perfect as the thought he feels. Since he does not find mankind perfect enough to manifest his thought in perfection, he takes his type from the natural world, or creates a form that will show his thought as realized.

W. W. BLACK.

MISCELLANY.**TIPPECANOE MONUMENT.**

As a result of the contributions of the children last year there is in the treasury of the association \$107.12. While this is not as great an amount as the committee had hoped it would be, yet it is a fair start, and we are convinced that should each child in Indiana who has not contributed, give at least one cent, enough money will be received to erect a monument worthy the memory of the heroes who lie buried on this historic battlefield. This is an enterprise in which the whole state is interested, and we hope the boys and girls will erect a monument on Indiana's famous battlefield, toward which they can point with pride, as the work of their hands.

Wherever the matter has been presented to the children, they have shown their patriotism by the spirit with which they have entered into it.

We ask the teachers of the state to present it to their pupils. Let them know that each penny given goes for no purpose but the monument, and that upon their efforts depend the success of this enterprise, and its success will be all that can be expected.

All money contributed should be given to the county superintendent of each county as soon as possible, for a contract will be made for the monument the first of January, 1897, based on the money in the treasury at that time. Hoping that each teacher will co-operate with the committee in erecting this monument,

We remain respectfully,

THE EXECUTIVE COMMITTEE,

Pres. J. M. SULLINS,
Treas. WORTH REED, } La Fayette.
Sec. J. L. GLASCOCK, }

WAYNE COUNTY is one of the most popular counties of the state. Outside of Richmond, it contains eleven towns that employ four or more teachers, each.

MARTINSVILLE has changed its high school course from three to four years. Supt. Kerlin has re-modeled the course in conformity with the suggested state course.

J. B. PEASLEE, of Cincinnati, some years ago published a pamphlet on "trees and tree-planting." Any one wishing something in this line should write Mr. Peaslee.

LEBANON has opened its school year in good shape, with over a thousand pupils. The high school is unusually full. The number will reach 140 by the holidays. Of this number, thirty are country school graduates.

THE Union county institute, which was in session Aug. 24-29, was fully up to the high standard of past years. Supt. Osborne is to be commended for the excellent program which was carried out. The interest of the teachers was shown by the fact that every one in the county was enrolled. The work of the instructors, Prof. J. Zeller and Dr. J. A. Woodburn, was thorough and efficient.

THE Fulton county institute is reported a marked success with Dr. T. J. Bassett and E. B. Bryan as instructors. Those who know these men will not doubt the correctness of the report. Supt. Fish keeps an institute in good running order.

THE Rush county teachers resolved that the law should be so changed that the state superintendent should be required to examine all examination manuscripts and issue all licenses to teach, and that licenses thus issued should be good in any county in the state.

THE Allen county institute was largely attended and well instructed. It began September 7, and the Ft. Wayne teachers attended in full force as they were paid for their time. The institute week is counted as a school week. Supt. Young manages an institute with skill.

BROOKLYN, N. Y.—Ten public school teachers have been retired under the Teachers' Retirement Fund law. The fund, which is made up of one per cent. of the teachers' salaries, now amounts to \$9,000. The pensions of the retiring teachers will range from \$325 to \$1,100 a year.

THE next annual meeting of the Indiana state conference of charities and correction, will be held at Richmond, Nov. 11, 12 and 13. This is a meeting of growing importance. T. J. Charlton, superintendent of the reform school for boys, is one of the leaders in these meetings. All teachers should be interested in this work.

A LIBRARY SECTION has been added to the N. E. A. Teachers and librarians have many things in common, and should have more. Libraries and schools have a natural relation and their connection should be vital. The officers elected are Melville Dewey, of the University of New York, president; and Miss Mary Eileen Ahern, formerly state librarian for Indiana, but now of the library bureau of Chicago, as secretary.

THE Sullivan county teachers resolved in favor of a law which will allow two days instead of one for examination for licenses. They would have the law say the last Friday and Saturday of each month. The JOURNAL heartily endorses this change and would add another. There is no need of twelve examinations each year. After September, or October, there is no need of another examination till March or April. With *four* examinations each year, all needed work can be done.

STARK COUNTY held its institute September 14-18, with E. B. Bryan of Butler University as the principal instructor. Supt. Sinclair had arranged that his outside visitors should distribute themselves through the week so as to make themselves most useful and in this way had outside help every day. Mr. Bryan did, as usual, most acceptable work. The visitors contributed their mite and the institute was without any question a success. The social on Tuesday evening was a characteristic feature long to be remembered. State Superintendent Geeting was present one day and was accorded a warm reception. Supt. Sinclair took special pains to introduce him to his teachers. This indicates the cordial relations that exist between Mr. Sinclair and Mr. Geeting, the two opposing candidates for superintendent of public instruction. This is as it should be.

THE reform school for boys, T. J. Charlton, superintendent, made an exhibit at the State Fair. There were two cases, one containing iron tools made by the boys, the other samples of their woodwork, such as bookstands, frames, marking gauges, rulers and boxes of different kinds. The exhibit was in charge of George F. Bastman, who has charge of the manual training shop. Mr. Bastman took much pride in showing the work of his boys, forty-three of whom he has under his instruction.

TIPTON had two of its school houses struck by lightning during a storm last summer—one of them, the newest and best in the city, being burned and injured to the extent of \$8000. In this building was located the city library and supplementary reading books, worth at least \$500, all of which were burned. The superintendent, Frank L. Jones, had his office in this building and in it his type-writer and many books for his private library. He lost all and had no insurance. The building was insured.

INDIANAPOLIS.—At the close of the first week, the school enrollment, notwithstanding the State Fair, reached 18,151, which is nearly 2,000 more than the first week's enrollment last year. Of the above 804 were in the high school and 735 in the manual training school. As the number of school rooms in the city had not been increased over last year, the result is,—overcrowding. The half-day plan for primary pupils has been adopted, and in some parts of the city this is carried up as far as the fourth grade.

A MANUAL FOR TEACHERS, based on the course of study provisionally adopted by the city superintendents' state convention last October, has been jointly prepared by R. A. Ogg, of Greencastle, B. F. Moore, of Frankfort, Edward Ayres, of Lafayette and W. C. Belman, of Hammond. These superintendents propose to test this course of study in their several cities and thus pave the way for a uniform course of study for the cities of the state. This course will doubtless need modifying after it has been tested, but at present it seems the best that can be made. It is certainly full of excellent features.

THE COMMITTEE OF TWELVE.—The committee on rural schools held several meetings during the sessions of the N. E. A. at Buffalo. They decided upon holding a general meeting of the entire committee at Chicago, November 18, 19, 20, and 21. The sessions will be held at the Auditorium from 9 to 12 A. M., and from 3 to 6 P. M., the evenings being reserved for such purposes as may seem best at the time. They also recommend that the preliminary reports of the different sub-committees be placed, either type written or printed, in the hands of each member of the committee before November 5. Henry Sabin, superintendent of Iowa, is chairman.

MARION.—This is W. D. Weaver's eight year as superintendent. When he took charge there were 22 teachers, there are now 70. The high school employs seven teachers with Virgil McKnight as principal. The pupils number 250. There are seven district principals as follows: S. S. Bowman, James F. Hood, W. T. Brownlee, H. C. Clayton, Jno. H. Bryan, W. S. Malott, Alice Davis. Every building has been built or re-modeled since Mr Weaver began his work. While the growth of the city has been rapid, the schools have more than kept pace with the improvements. Supt. Weaver is held in high esteem and his superior ability is recognized by all.

THE Fayette county institute convened August 31. The instructors were A. R. Charman and Robt. M. King. The work was on method and literature. A "social" was held Monday evening at which nearly all the teachers were present. Refreshments were served and "it was all free." The attendance was larger than any institute ever held in the county, the actual enrollment being ninety-eight and the average daily attendance something more than ninety. When it is considered that there are only eighty-three teachers in the county, including the city superintendent and the music teacher, the "success" of the institute becomes all the more apparent. The interest was unflagging, more than 200 persons heard the last talk of the session. Fayette county is "growing" educationally and desires a place in the front rank. W. H. Glidewell is the superintendent.

PERSONAL.

J. H. MAVITY has captured Atlanta.

F. A. GAUSE takes the lead at Cicero.

JACOB ROOT is in charge at Monterey.

J. W. OUTLAND is principal at Webster.

JOHN LONG holds sway at Medarysville.

ELMER CUMMINGS is in charge at Houston.

LEE AULT still holds the reins at Hagerstown.

ALEX. THOMPSON keeps things quiet at Upland.

J. H. SCHOLL superintends the schools at Milton.

M. R. SUMMERVILLE is in the saddle at Swayzee.

W. S. LUCAS makes the school rules at Freetown.

W. C. DAY is in charge of the schools at Westfield.

C. H. KING is principal of a graded school at Pulaski.

N. C. RANDALL wields the "birch" at Fishers' Switch.

J. E. PAYNE is the biggest school man at Crothersville.

M. H. STUART continues as superintendent at Sheridan.

W. F. GILCHRIST is in control of the Jonesboro schools.

FRANK LONG is the bright and shining light at Star City.

FRED C. WHITCOMB is principal of the Delphi high school.

C. A. PLASKET is the man that must be consulted at Dublin.

U. S. GRANT marshals the educational forces at Francisville.

JOHN SHAFER is the director of the schools at Williamsburg.

O. L. VORIS continues in charge of the schools at Centreville.

W. C. REYNOLDS is in control of the schools at Green's Fork.

C. W. KIMMEL continues in charge of the schools at Winamac.

A. L. ELLABARGER is the source of information at Fountain City.

E. A. SHULTZE continues as principal of the Noblesville high school.

THOS. E. SANDERS directs the work of the boys and girls at Courtland.

D. K. HAYES, formerly of Delaware county, is principal at New Haven.

A. E. VANCE and five other teachers are having a pleasant time at Arcadia.

ELLIS KACKLEY and Tampico will be inseparable for the current school year.

C. T. MENDENHALL and six associate teachers conduct the joint school at Carmel.

HERBERT CHARLES manages to get a living by conducting the schools at Economy.

W. O. WARRICK still holds the fort at Gas City, where eleven teachers are employed.

MISS LOTTA DYE formerly of West Lebanon, will teach in Williamsport the coming year.

J. F. HOOD, who represents the JOURNAL in Grant county, is principal of building No. 1, in Marion.

A. J. WHITELEATHER, a state Normal graduate, is serving his third year as superintendent at Knox.

ARNOLD TOMPKINS worked in two or three institutes in this state this year and is as interesting as ever.

PAUL WILKIE is superintendent of the Cambridge City schools and C. O. Beck is principal of the high school.

R. W. HIMELICK is serving his fourth year as superintendent at Fairmount. Twelve teachers are employed.

CHARLES JORDAN is principal of the Franklin township (Wayne county) high school which employs four teachers.

C. E. SMITH, a De Pauw graduate, has entered upon his second year as superintendent of schools at North Judson.

MISS LYDIA DWIGGINS is the supervisor of primary grades in the Marion schools. Another step in the right direction.

Exhaustion

Horsford's Acid Phosphate

Overworked men and women, the nervous, weak and debilitated, will find in the Acid Phosphate a most agreeable, grateful and harmless stimulant, giving renewed strength and vigor to the entire system.

Dr. Edwin F. Vose, Portland Me., says: "I have used it in my own case when suffering from nervous exhaustion, with gratifying results. I have prescribed it for many of the various forms of nervous debility, and it has never failed to do good."

Descriptive pamphlet free. Rumford Chemical Works, Providence, R. I. Beware of substitutes and imitations. For sale by all Druggists.

L. M. SNIFF, president of the tri-state normal at Angola did some institute work at Ft. Wayne that was highly appreciated.

W. R. HARBISON, science teacher at Lebanon, is sick of typhoid fever and cannot enter school before the beginning of the second month.

W. S. ALMOND, superintendent at Delphi, did much preliminary work, and so his schools opened and moved forward without friction.

D. W. DENNIS, principal of natural science in Earlham college, is becoming one of the most popular institute instructors in the state.

C. E. TAYLOR, a graduate of Hanover college, is the new high school principal at Madison. He will have hard work to keep up the old standard.

G. L. SPILLMAN, for fifteen years a member of the Central Normal school faculty, will spend the coming year in Indiana University as a student.

G. W. MICHAEL, principal of the business college of Logansport, visited many institutes and talked to the teachers in a way that interested them.

MISS NELLIE DEEM, has been appointed principal of the Union City high schools to take the place of H. W. Bowers, promoted to the superintendency.

L. W. FAIRFIELD, a member of the Angola normal faculty was one of the instructors at the Pulaski county institute, and gave excellent satisfaction.

W. H. MACE, who is in Europe on a leave of absence, is now at Jena but expects to spend the winter at Berlin. Ginn & Co. will soon publish his new book on the principles of history.

SHERMAN DAVIS, a member of the state university faculty, is a new worker in the institute field. Mr. Davis had work in several institutes this year and gave eminent satisfaction in all of them.

J. E. MCGILVREY, a state normal graduate is associated with Prof. Tompkins in the pedagogical department of Illinois university. See his article in the pedagogical department. It is very suggestive.

H. W. BOWERS, principal of the Union City high school, has been promoted to the superintendency to take the place of Mrs. Patterson, deceased. This is a worthy promotion. Mr. Bowers is a good man.

EDWIN S. MONROE, after serving one year as superintendent of the Mt. Vernon schools was re-elected for two years. This indicates well. Mr. Monroe's report in the local papers makes a good showing.

A. W. MOORE, formerly of this state, but now of Chicago university, did some good work at the White county institute. Prof. Moore was recently offered a place in the university of Illinois, but declined to accept.

MISS ALICE R. HARPER, of Cory, who is widely and favorably known as one of the most successful school journal and book solicitors in the state, was married to John E. Ballard, of North Salem, Sunday, Sept. 13. The new home is Amo, Ind. The JOURNAL extends hearty congratulations.

MRS. EMMA MONT. MCRAE, spent the first part of her vacation in Europe and she reports an enjoyable visit. She returned in time to do her usual amount of institute work, which is always highly appreciated.

O. M. SEARLES, son of County Superintendent Searles of Grant county, who was formerly in charge of the schools at New Carlisle, has been engaged for a third year as principal of the high school at Mankato, Minn., at an increased salary.

J. N. SPANGLER, a graduate of the state university and also of the state normal, and for several years past superintendent of the Rockville schools, has entered the university of Illinois to do post graduate work for the current year. Half his time will be spent in the pedagogical department under Prof. Tompkins.

E. O. ELLIS, formerly superintendent of Grant county, is now devoting his entire time to the interests of Fairmount Academy. The academy building has been entirely restored since the fire, and is well equipped. Those who know Prof. Ellis do not need be told that all the work done in the school must be honest and thorough.

ED. R. SMITH, who is so well and so favorably known to Indiana teachers, has returned from a European trip, but instead of resuming work for Ginn & Co., is now representing Allyn & Bacon, of Boston, who publish an excellent line of high school and college text-books. Mr. Smith's territory is Indiana, but his headquarters will be Chicago.

PROF. JOHN M. COULTER, formerly president of Indiana University, but now at the head of the department of botany in Chicago University, has recently been honored by being elected president of the Botanical Society of America. This society is composed of twenty-five members and is represented in all the leading educational institutions of the United States.

J. F. HAINES has served as superintendent of the schools at Noblesville for many years. Mr. Haines has been spending his summer in Indiana University and doing private study for some years and has finally secured a diploma from the university. This shows perseverance and a laudable ambition. Noblesville employs twenty-six teachers and the high school enrolls 160 students.

L. J. RETTGER, a member of the state normal school faculty, spent last year in Europe on leave of absence. While gone he visited Palestine and spent three weeks in Jerusalem. Prof. Rettger is a popular institute instructor, and his unusually instructive lecture on Palestine has made him specially popular this season. This lecture is well worth hearing and would be a drawing card in any lecture course.

CYRUS SMITH, one of the most popular school-book men who ever did business in this State, is now located at Lansing, Mich. He has been in his present business for more than thirty years, and because of long and faithful service his house, the American Book Company, does not require him to travel any more. He does his work by correspondence, and occasionally makes a trip on special business. Mr. Smith recently visited his relatives and old friends in and near Indianapolis. He is looking well.

MURRAY BRIGGS, for twenty years a member of the board of trustees for the state normal school, and for sixteen years its president, recently died at his home in Sullivan. Mr. Briggs was a man of high, moral standing and was held in esteem by his friends and neighbors. He took a fatherly interest in the normal school and it will be difficult to find a man to take his place who will bring to the school such devotion.

W. B. SINCLAIR superintendent of Stark county, who is candidate on the Democratic ticket for Superintendent of Public Instruction, has spent most of the summer visiting institutes. He lost two weeks on account of sickness, but with this exception he has been all the time on the move. Mr. Sinclair has been cordially received wherever he has gone and he has uniformly made a good impression. There is a general feeling that if he is elected Indiana will continue to have an efficient superintendent.

MRS. SUSAN B. PATTERSON, superintendent of the schools at Union City, died, recently at her home in St. Paul, Minn. Mrs. Patterson was principal of the high school, while J. R. Hart was superintendent, and when Mr. Hart went to Lebanon she was promoted. She was giving entire satisfaction, and will be greatly missed. As high school principal and as superintendent she exercised a large and helpful influence among the young people of Union City. She was a woman of many virtues, whom to know was to respect and love.

D. M. GEETING, state superintendent has put in the entire summer visiting institutes. He averaged more than one a day for the entire institute season. Mr. Geeting has visited *eighty-five* of the ninety-two counties of the state and is intending to visit the remainder before the close of his term of office. If he succeeds in doing this he will break the record, as no superintendent has yet visited *all* the counties in a single term of service; and yet this is what the law contemplates. Everybody likes Superintendent Geeting and he is attending strictly to business.

JOHN M. BLOSS, formerly Superintendent of Public Instruction for Indiana, but for several years past president of the State Agricultural College of Oregon, recently lost his place through political chicanery. If he does not find a suitable position in educational work he will probably return to Indiana and engage in other business. Mr. Bloss owns a good 400-acre farm near Muncie, and is in no danger of going to the poor-house, even if he should fail to get another position. He is too good a school man, however, to lose from the profession, and it is to be hoped that he will soon find a place.

T. F. FITZGIBBON, for several years past superintendent of the Elwood schools, was in July re-elected for two years and granted one year's leave of absence. As soon as the schools are fairly under headway he will go to the state university and spend the year in study. He will probably be able to graduate in that time, as he has spent five summers at the university and his leisure hours have not been wasted. Mr. Fitzgibbon is already a graduate of the state normal. Daniel Freeman, of the high school, will supervise the schools in Mr. Fitzgibbon's absence. Elwood makes a practice of giving its teachers leave of absence in order to prepare themselves to do better work. Four teachers who have been away for this purpose have returned this year. *Excellent practice.*

INDIANA SCHOOL JOURNAL.

BUSINESS NOTICES.

SCHOOL BOARDS contemplating changes can learn the address of the best Western and Eastern teachers, willing to change places, by addressing Orville Brewer, manager of the Teachers' Co-operative Association, 101 Auditorium Bldg., Chicago. We can assure all who write of confidence and honorable treatment. 2-tf.

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THE MUNGER.—On another page will be found the advertisement of the Munger Cycle Company. There is no doubt that this company makes the best light wheel in the market. Only the best of material is used and every wheel is "high grade." It always pays to get the best. It is the cheapest in the long run. Call at office or write for descriptive circular.

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Longfellow's Paul Revere's Ride, the Cumberland, and Other Poems (1775-1862). With Notes. In Riverside Literature Series, No. 63, paper covers, 15 cents, *net*; bound up with No. 11, containing other poems by Longfellow, linen, 40 cts. *net*.

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INDIANA SCHOOL * JOURNAL

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AUTUMN TRAVELERS.

PROF. D. W. DENNIS, EARLHAM COLLEGE.

It was 4 P. M. on Friday, September 18, 1896. Miss A. of the Richmond City schools, had arranged for an excursion into the country and invited the writer to go along. In a pasture on the common just at the outskirts of the city were many thistles. The horses and cows had shunned them as had also the cats and dogs, and so did now the boys and girls. There they stood apparently untouched, each surrounded by its little tuft of uncropped grass which it seemed to protect. "Why not have the thistle for the national flower?" asked James; "it bosses everything; can take care of itself; it has the American spirit; every one of its prickles seems to be a new declaration of independence."

The air seemed to be quite full of thistle down flying hither and thither. Lucy caught some of it and came running to Miss A. asking what it could mean. The children all pressed around as she explained that attached to each of the little balloons was a seed which would ripen and grow and after two years produce a thistle like the tall ones before them in the field; that the balloons served the purpose of scattering the seeds far and wide.

"And so," added James in triumph, "the thistle can plant itself in distant and rich soils, it can," and his eye twinkled afresh as he quoted from the Sage of the Chappaqua, "'go West and grow up with the country.' Hurrah for the thistle; I vote it the national flower."

"But has the thistle any friends?" asked Lucy; "may be thistles can, like boys, be too independent; I at least vote against it."

"A formal vote," Miss A. added, "should be deferred until many excursions have given you a wider acquaintance with outdoor nature. Two things about the thistle however seem to me to be well worth remembering; the method by which its seeds are scattered and the prickles by the help of which it protects itself."

Just then, Johnny, who had wandered in pursuit of a butterfly into a neighboring corn field, rejoined the company with his gray round-about covered with Spanish-needles; Miss A. seized the opportunity, while the most obtrusive quality of the Spanish-needle was thus emphasized before the children, to ask them to consider whether between it and the thistle there was any point of resemblance. She told the children to run where they would for an hour and then gather for rest in the shade of a distant tree which all could see.

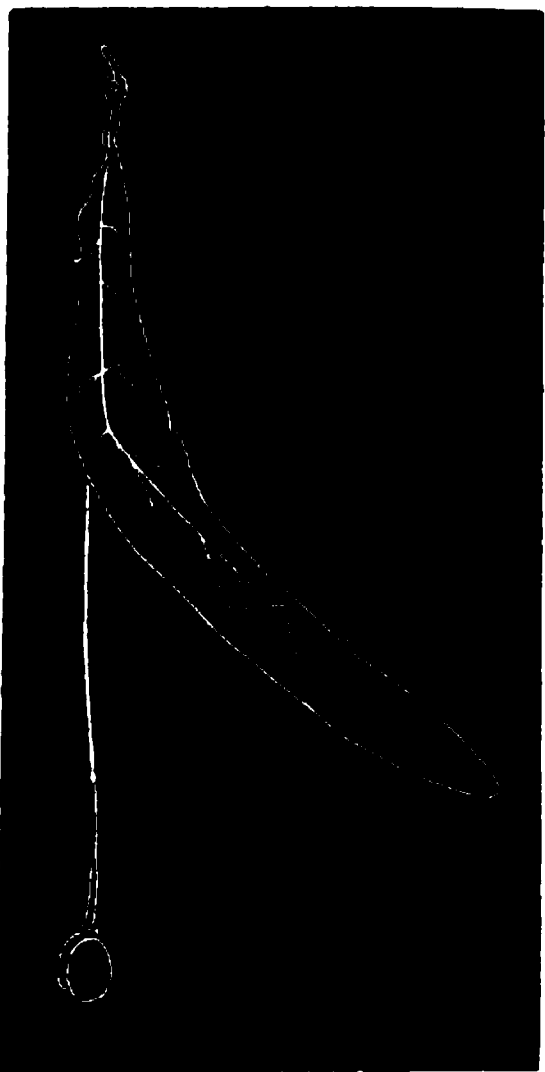
All children and all who have been children will know how quickly the hour passed, and all who have the pleasure of knowing Miss A. will also guess how gladly they came to rest at the tree. The clothing of the children furnished an incidental collection of stick-tites, cuckie burrs and burdock burrs. It was speedily agreed that all these and the Spanish-needles were alike in their ability to cling to the clothing of boys and girls and, as the boys learned by experiment, in the hair of the girls as well; but it was only after two or three tidy and industrious girls had scraped all the stick-tites from their dresses that it appeared that this was a way by which the seeds of these several plants are scattered. Frank, who had lived in the country, remembered that these often stick to sheep and other animals; and Paul, who had often been at Test's Woollen mills, observed that in this way seeds are often carried many miles from the places where they grow.

"And is there," asked Miss A., "any point of resemblance between all these and the thistle?"

"They have no friends," said Lucy, "and would any of them suit for James's national flower?"

"But these all sponge," replied James, "they make innocent sheep carry them round and make no return whatever; the thistle taxes only the winds."

"Every one of them, at least," began Miss A.—Johnny who had been all attention finished the sentence—"has a way of its own to get its seeds scattered."



It happened that the tree under which we were resting was a linden. Miss A. asked Johnny to climb the tree and pull off and drop one of its seeds. This, she directed him, must be pulled off with all of its stem attached. In less time than I tell it, Johnny obeyed and as the oblique leaf appendage of the pedicel (see cut) set it to whirling round and round and sustained it in the breeze which carried it forty feet from the tree, the faces of the children glowed as only the faces of children do when they see the truth afresh. Their admiration would have been surprise had they not known Miss A.'s suggestions were never trivial. The seeds with their winged pedicels were

turned over and examined and dropped for the hundredth time by the children.

Frank added that he had seen the two winged seeds of the sugar maple fall in somewhat similar manner; that he knew a plowed field on the east of a forest that was covered every year with a growth of young maples more than twenty rods from the forest; and he ran to a low maple tree close by and brought enough seeds for all to see.

"And we," said Lucy, "have tall maple trees in our yard and every fall the seeds are blown on the roof; and one day when papa had climbed to clear them from the gutters, he called us all out to see how they hovered and fluttered in the air as they were falling."

"And are there other instances of contrivances for scattering seeds?" asked Miss A. looking over the green sward where, though it was so late, many dandelions had been in bloom. At once a half dozen children who had amused themselves curling the seed-stalks of dandelions and making chains of them remembered that at the top of the stem was a globe of balloons very similar

to those of the thistle and they asked Miss A. if these were not also for scattering the seeds; she answered that they were.

"And so," said Lucy, "the dandelion can take care of itself without prickles."

"Yes," said Miss A., "like Burns's Daisy. Two verses of this poem might interest you.

"Cauld blew the bitter, bitter North
Upon thy early humble birth;
Yet cheerfully thou glinted forth
Amid the storm;
Scarce reared above the earth
Thy tender form.

"The flaunting flowers our gardens yield
High sheltering woods and wa's maun shield,
But thou beneath the random bield
O'clod or stane
Adorns the histie stibble field
Unseen, alane."

"It would be possible to take too much care even of girls, wouldn't it, Miss A.?"

This of course was James's question.

"And is it too little care that makes thistles of boys, Miss A.?" asked Lucy.

Jennie who had not before made any remark except in answer to questions, and who it was easy to see was more in love with the literary than the nature side observed that they would all like to hear the entire poem on the daisy.

After promising this at an early date, Miss A. now turned the conversation to the touch-me-not. All the children had seen it, and it was soon determined that it had springs in its seed pods which, bursting suddenly, scatter the seeds in every direction.

Miss A. had gathered some fertile fronds of a maiden-hair fern which the writer and the children supposed was to set off with green the beautiful bouquet of flowers which she had collected during the walk; she now distributed the fronds among the children and asked them to examine the under-side which they eagerly did. One by one they all had rolled back the reflexed margin and saw a group of small bodies under it.

"The marginal covering," said Miss A., "is called an indusium, and the little bodies which you can just see under it are called spore-cups. Each one of these contains many spores so small

that we cannot see them without the microscope, but one day before the year closes, we will ask Professor Thompson to put some of them under the microscope so we can see them. Each one of these spore-cups has an arrangement by which it must burst suddenly and so scatter the minute spores. These are so light that they are carried long distances by the wind. In deep, damp, rocky glens like Watkin's Glen, N. Y., or the Bloomingdale Glens in Indiana, these spores are lodged high up on the rocks where they slowly grow and mature a seed from which a plant like the first one grows."

"How many contrivances for helping the plant by scattering the seeds have we considered this afternoon?" asked Miss A. The answers came fast and many at once; it was noticed that every child in the company helped.

"The thistle has a balloon; the sugar maple, wings; the linden, an oblique sail; the stick-tite, hooks; the Spanish-needle and burrs have prickles; the touch-me-not elastic bands and the spores of the fern are so small that the wind easily carries them."

The answers were not all at first so well expressed as above, but it seemed to be a part of Miss A's plans never to leave an answer until the statement of it was clear and full, and the writer believes that they were better even than his brief summary indicates.

Joseph, who before had only talked in the chorus, now called out: "Miss A. you said two things were important about the thistle, the balloon and the prickles, and as I came through a raspberry patch I noticed prickles all over the stems of the raspberry and many also on the leaves, and I thought you might think this important and so brought a brier along."

Miss A., pleased that he had remembered so well, took the brier and it at once appeared that all the children were acquainted with it; had seen it growing in garden or wood. Lucy among other things observed that it had friends at least if it did not have prickles, as she had often seen the birds eating the berries.

"And I," said James, "have often seen girls eating them."

"And does the raspberry get anything for the berries it gives to girls?" asked Miss A.

"Yes. It does," answered Frank, "for I had to help hoe them all last summer."

"It looks," said Miss A. then, "like a case of mutual helpfulness. The raspberry gives fruit to man and man gives culture, protection from the weeds, to the raspberry."

"But Miss A." said Joseph, "what does the bird do in return for its fruit?"

"It carries the seeds otherwheres and so we come upon another means of seed scattering as well as a case of mutual kindness."

"Is'nt it beautiful," she asked. "that the raspberry is willing to help the bird and the boy with fruit and the bird and boy are willing to help it by carrying its seeds and cutting away the weeds? Kindness gets friends for bird or plant or boy. There are many plants that help each other in ways similar to this. There are many animals that do the same; and there are many cases like this in which this helpfulness is between plant and animals. Scientific people have given a name to this helpfulness—*commensalism*, and we will plan our next excursion so as to meet other beautiful illustrations of it."

It was after sun-down; one star after another appeared, timidly at first and tremblingly in the sky. The children were loaded with beautiful flowers. We were just coming up to Main street from the piano factory when Miss A., with her good-bye to the children, recited Holmes's poem, telling why the stars twinkle and the hues of the flowers are so varied and beautiful:

When Eve had led her Lord astray,
And Cain had killed his brother,
The stars and flowers the poets say,
Agreed with one another,

To cheat the cunning tempter's art,
And teach the race its duty,
By keeping on its wicked heart
Their eyes of light and beauty.

A million sleepless lids they say
Will be at least a warning.
And so the flowers would watch by day,
The stars from eve to morning.

On hill and prairie, field and lawn,
Their dewy eyes upturning,
The flowers still watch from reddening dawn,
Till western skies are burning.

Alas ! each hour of daylight tells
A tale of shame so crushing,
That some are white as sea bleached shells,
And others always blushing.

But when the patient stars look down
On all their light discovers,
The traitor's smile, the murderer's frown,
The lips of dying lovers,

They try to shut their saddening eyes,
And in the vain endeavor,
We see them twinkling in the skies,
And so they wink forever.

We begged of Miss A., as we turned to cross the bridge for home, the privilege of accompanying *all* her school excursions, and to such purpose that we are justified in promising the readers of the JOURNAL the best summary we can make of at least one more outing.

THE NEW AGAINST THE OLD.

BY WILLIAM T. HARRIS.

The protest of the new education against the old education strengthens its cause by an appeal to scientific method, and to the importance of comprehension and insight over mere verbal memory and parrot repetition. But it gets so far in some of its applications that it develops weak traits of its own. It leaves the children so much to their caprice that they fail to develop what is called character or moral tone. They are self indulgent and have to be amused, or else do not choose to give their attention. They are great at play, but good for nothing at real work. They do not respect the organization of the school in which they are enrolled, and they will not respect the social whole in which they grow up. They will pass through life stumbling over themselves—not able to discriminate their idiosyncrasies from their rational aims and purposes or from their moral duties.

In the end even their mastery of scientific method will not avail to save them from becoming sour and misanthropic. For they will not be able to combine with their fellow men—they will have no directive power.

I do not know of any educational reform so much needed as a theory and practice of education which unites and adjusts these

two tendencies—that of the old education toward will-training, and that of the new education toward intellectual insight and power of independent thought.

For it is the unconscious conviction of the advocates of the old education that character is more important than knowledge. This conviction steels them against the adoption of the good that the new education offers. They see something amiss in the theory of the new education. But they do not realize how fully they could unite what is good in both systems by rigidly confining their mechanical methods to discipline of will and training, and adopting the methods of the new education for instruction or intellectual education.

This reform would also cure the besetting evil of the new education. The disciplinary side would retain its military exactness without its harshness, for the pupil would be permitted to understand and appreciate its motives. On the other hand, in his intellectual work the teacher would constantly press him toward original investigation, which is the highest of scholastic methods.

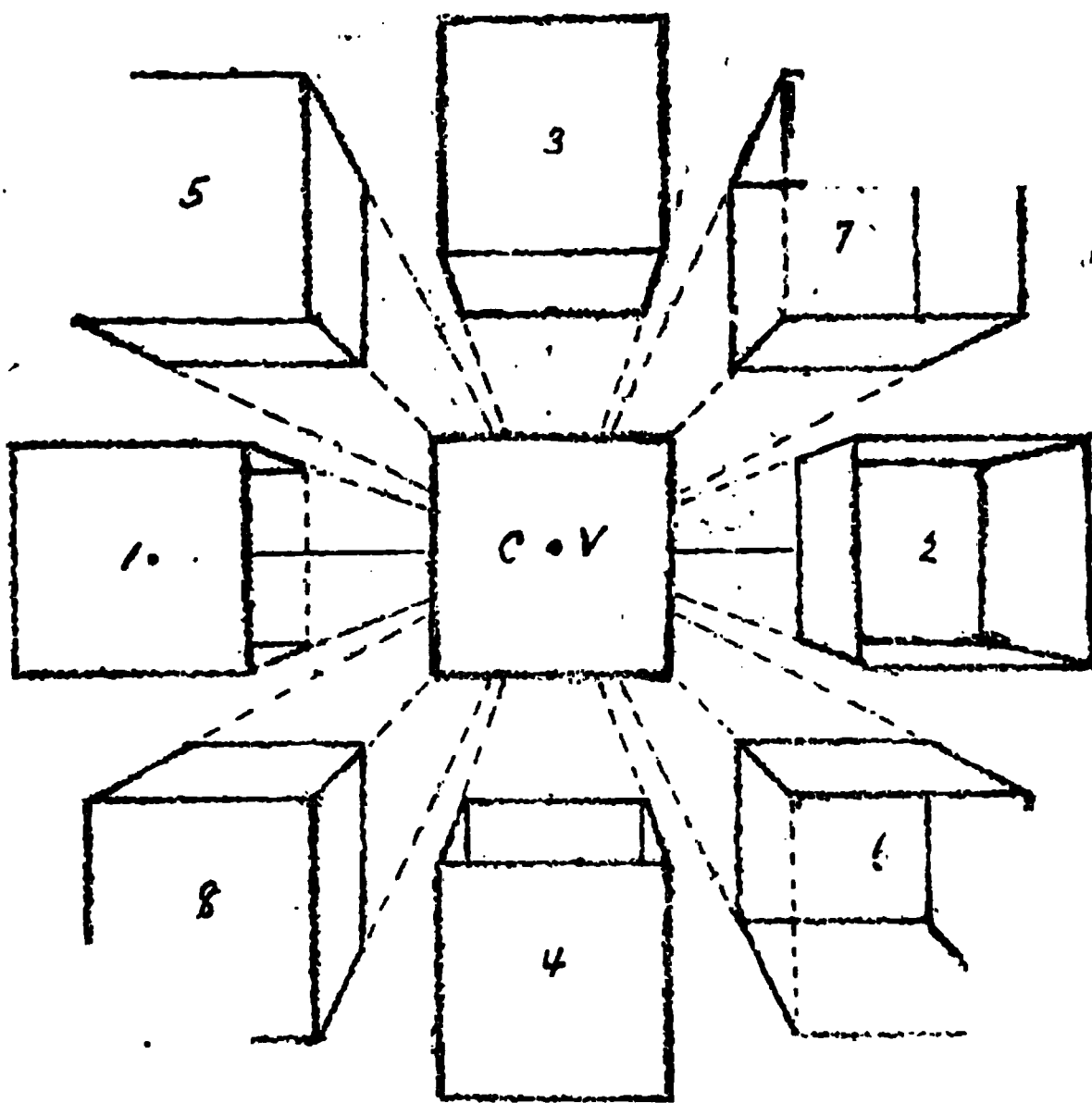
This reform of reforms is urgently needed because of the increasing influence of the method of natural science, and the consequent tendency to break completely with tradition. Inasmuch as the interest of the pupil is an essential item in effective education, it is held by some that there should be free election of studies even in the primary school. "The pupil should study only what interests him." "One study is as good as another, provided the pupil pursues it with equal zeal."

Here we are on the point of losing sight of the most valuable heritage of the old education, namely, the ideal of a liberal or rounded education which contains within it the means of opening all the five windows of the soul. For mathematics and natural science open only two of these windows, while literature opens another and history still a fourth. The fifth window is opened by such studies as grammatical syntax, logic, psychology, and philosophical studies. The course of study adopted is as a whole something psychologically complete.

The reform of education that I recommend will discriminate between the individual and social elements in education and provide amply for the retention of both, so as to save the moral education of the old and add to it the individuality and self-activity of the new education.—*Public School Journal*.

DRAWING III.—CUBICAL OBJECTS.

W. N. PARKS, DENVER, COLORADO.



All diameters of the cube, like those of the sphere, are equal. The sphere has the same appearance in all positions. The appearance of the cube changes with position. The outline of a sphere is a circle. The outline of any face of the cube when viewed directly, that is, at right angles, is a square. The accompanying plate shows the appearance of the cube in nine different positions; and by turning the paper upside down, its appearance in nine more positions, may be seen.

This plate is not simply to be looked at, but a cubical object should be placed in every position here shown and carefully studied and drawn. To see it as represented below the eye, it may be placed on a flat top table; but by driving a tack into the middle of one side and suspending it from the ceiling by means of a string or wire and raising and lowering, it may be placed and viewed in all positions. The center drawing marked C. V. shows the appearance when directly in front of and on a level with t'

eyes—only one side can be seen in this position and the appearance is that of a square. 1 represents its appearance on a level with the eyes but to the left; 2, the same, but to the right. 4, 6 and 8 represents it in different positions below the level of the eyes; and 3, 5 and 7, above. In 1, it appears as an empty box with the right side removed; 4 has the top removed; 7 and 6, the left and front sides removed. Close one eye and study these illustrations until thoroughly understood; then turn the paper half around, either way; also upside down and study. The dotted lines show imaginary edges and the apparent direction of the edges. It will be noticed that all edges seem to extend towards the dot C. V. which is directly in front of and on a level with the eyes; and such is right. Also observe that the farther side of the cube, or box, as here shown, appears narrower than the nearer one.

When the plain cube can be drawn as it appears in any position, objects based upon the cube, as boxes, houses, books, etc. should be drawn. The following is good practice: Draw a cube in various positions, then convert into a box; remove the top, the front side, left side, right side, front and top, right and front sides, etc.

NOTE—One corner of 5, 6, 7 and 8 was omitted purposely; but such should and can be easily supplied by the imagination. While the suggestions here have been directed to the teacher, it is intended that they be passed on to the pupils, as soon as fully digested.

CORRELATION IN UNGRADED SCHOOLS.

CHAS. MCMURRY.

The common sense meaning of *correlation* in school instruction is found in the idea of *thoughtfulness*, of mental wariness, or in the habit of mind to look beyond the immediate fact to its nearer and farther associations. As Lowell in his essay on Books and Libraries says, "This method forces upon us the necessity of thinking, which is, after all, the highest result of all education. For what we want is not learning but knowledge; that is the power to make learning answer its true end as a quickener of intelligence and a widener of our intellectual sympathies."

In a reading lesson from Irving's *Rip VanWinkle*, it is not enough to simply read the story, though it be orally well rendered.

The awakening of thought, the variety of suggestion and stirring up of mental images by which the depth and breadth of the child's inner being are set in motion, this is by far the greater thing. Whatever vitalizes the connections between this story and the child's own interests, whether it be recalling a trip to Autumn woods and hills, or ghost stories, or home readings, will cause the story to strike its roots far into childish experience. Recall and picture Irving's home on the Hudson, and the geography of that part of the river, also the place and appearance of the Catskills. How the Dutch settlers took up their early homes along the Hudson and its adjoining valleys and a few of those revolutionary scenes which interest children may be vividly thought in close relation to poor Rip's experiences. These things woven into the reading lesson by teacher and pupil, are necessary to the proper setting and satisfactory appreciation of the narrative.

As the eyes of the children are thus opened beyond the narrow borders of this charming story, they have the full satisfaction of finding a place for this story in the midst of their other earlier experiences. This is equivalent to teaching the eye to adjust itself to larger landscapes, to grasp every new topic, small though it be, within the circle of a broadening horizon which gives it relative place and value.

Such a study of Rip VanWinkle makes it profitable to give it a fuller treatment than is necessary for a simple oral rendering. It always takes time to survey a topic broadly in its various relations to child experience at home, to history, geography and other interests. The use of references to readings in the library or to cyclopædias and maps requires time and effort. But there is a decided advantage in the encouragement to reflection, in the wide-awake attitude of mind for discovering the relations of a new subject to older experiences and to other studies usually thought of as entirely separate.

It might be shown by manifold illustrations that the reading exercises of the school are especially useful as a means of opening up the avenues of association between other studies. The best exercises of the readers spread out over all the fields of literature, history, natural science, and geography. The classics mostly used for reading purposes have a solvent power by which they take up the best thought materials from all studies. From the fields of natural science, biography, travel, geography, history

and present society, the classic writers have culled the choicest flower and fruit. In the classic readings, therefore, we shall not find systematic knowledge on any subject but a variety of excursions into many realms and much mingling or fusion of materials from the most widely separated sources. Any teacher, therefore, in the common schools who is inclined to set up high barriers between studies and to keep them isolated in separate apartments is admonished by all the classic writers to break down his barriers and build up many and easy avenues of communication between the studies. If, for example, we are reading Longfellow's story of Hiawatha in fifth grade, let the children be encouraged to bring to bear upon this story what they already know of Indian life and to gather from different sources what they may reasonably learn that throws light upon Indian life and history. Any small collection of Indian relics in the neighborhood will be serviceable. The geography of the upper Mississippi and of the Great Lakes will be reviewed to advantage. The scenes of Hiawatha's childhood, adventures, travels, love-making, triumphs and suffering should be located as well as may be. Go also a little into Longfellow's workshop and find out what materials he used from history and tradition as the framework of his story. The poem should not be overloaded with this reference work, but a reasonable amount of it will greatly strengthen the interest and intelligent grasp of the story. It will open their minds and enlarge their judgment in the effort to grasp it in its origin and proper setting.

It has been found that Robinson Crusoe as a reading book, when brought into proper relation to the familiar experiences and general practical information of children, calls them out to a definite and sharp review of their observations in shop and field. Pet animals, fruit growing, hunting and fishing and most of the commonplace occupations of men, besides geography, navigation, savage races, Bible instruction and home duties and virtues come in for a legitimate emphasis. How easy it is to leave all this out, treat the story simply as a reading lesson (spelling, pronunciation, definition and emphasis) and get from it none of that deeper thoughtfulness and practical use of life experience which is the best part of instruction.

There has been a strong effort to misconceive the meaning of the term *correlation* in school studies by thinking of it as artificial

and forced; as if it required some effort to manufacture or invent relations between subjects in the different studies. But if we will only open our eyes to things that are, to the close and important relations actually present between the studies, to the deep causes now operating to bind them together we shall best meet the situation.

Coal mines, for an example, are not an isolated topic in geography, but stand in close relation to our grates and furnaces, to railroading, to the manufacture of pig iron in blast furnaces, to commerce of all kinds, to great factories for glass, machinery, textiles, steel rails, and a score of the most important staples. The coal strata as they lie in the ground call us to explain the formation of such strata of coal, rock, clay etc., in the history of the earth's changes (geology.) The tools and giant powder used in blasting out the coal, the explosions, poisonous gases and safety lamps refer directly to physics and chemistry for their meaning.

When the very topic lies bedded in such close relations to other subjects, what excuse except our own ignorance and incapacity can be given for not allowing children to think and realize how close these important studies stand to one another? Will any one say that to direct children to such things in common school studies is forcing them into unnatural and artificial ways of learning? Is it not rather asking them to begin with the alphabet of thinking and to see things in their true and important relations?

It has been said often that our ungraded schools are the ones which best teach the children how to think, how to work things out for themselves. But nobody ever learns to think by ignoring the essential relations of topics. The best thinking does not consist chiefly in memorizing and reciting the statements of text books. It is the business of teachers to test the thoughtfulness and penetration of children in every direction beyond the mere verbal statements of the books. This applies to ungraded schools as much as it applies to any.

Gayly chattering to the clattering
Of the brown nuts downward pattering
Leap the squirrels, red and gray ;
Drop the apples red and yellow,
Drop the russet pears and mellow,
Drop the red leaves all the day.

—Whittier.

MUSIC IN THE COMMON SCHOOLS. (II)

W. E. M. BROWNE.

It should be kept in mind that this outline is intended chiefly to aid the teachers in ungraded schools or those having mixed grades. While it may in a general way be of some benefit to those having single grades, it will be found to advance too rapidly for the primary pupils of the first and second years.

ROTE SONGS.

The life of any school is a generous supply of good lively songs, which should be sung with the "spirit and the understanding;" should be of a nature calculated to enliven and impress upon the singers, the sentiment generally concerning some nature subject in hand. It is scarcely correct to sing spring-time songs in November, or Christmas songs in April. Select your songs with special reference to the occasion or the studies. Teach them by "rote" *i. e.*, by hearing them sung first by one. If the school has not the book, write the words upon the black-board, and have pupils copy them at writing exercises. Good songs for this time of year, are those concerning the falling of leaves, Jack Frost departure of birds, Thanksgiving, etc. There are a number of excellent "rote" song books to be had, from which selections can be made. The prices of these books vary from 20 to 35 cents each.

BREATHING AND PRONOUNCING.

Exercises in breathing should be kept up as a daily exercise. The fault of bad singing is chiefly bad pronunciation of both vowels and consonants. The vowels should first be studied singly; the correct position of the mouth insisted upon, and the sound repeated at different pitches of the scale. The sound of "a" can be best made by pronouncing the word "far." Press the teeth against the lower lip firmly, and force the mouth open quickly, throwing the chin down until the teeth separate nearly an inch (or the width of two fingers.) Sing all the words you can think of containing the sound being studied, up and down the scale after this fashion: 1, 2, 3, 4, 5; 5, 4, 3, 2, 1. "Far"—1, 2, 3, 2, 1; 1, 2, 3, 4, 3, 2, 1; "Bar;" "Car;" "Mar;" "Hark," etc., etc. The object being to pronounce the word

correctly, whether sung high or low. Use as a medium pitch the one produced by the "G" end of your pitchpipe.

The sound of \bar{a} is best found in the word "hay," which throws the teeth apart about half as far as in \bar{a} . Sing this in the same manner as above, using words such as "play," "flay," "stay," "fray," etc.

The vowel \bar{e} brings the teeth still nearer, shown by a vigorous "the," "she," "fee," etc.

The word "ball" gives the correct sound of \bar{a} ; and "hō" the proper position for \bar{o} ; while "who" will best illustrate the manner of singing "oo." Whatever words are used must be sung slowly at first, increasing the speed as the pupils learn how to form the words and change the position of the lips and mouth. The throat must be kept open, and the tongue, when not in use, flat in the bottom of the mouth. Practice singing with the mouth as wide open as the character of the vowel will admit, remembering that large and rapid motion of the chin is the principal factor in good pronunciation, whether for reading or singing. Final consonants should receive particular attention, such as "ts," "nd," "ing," "st;" also "ess," "en," "ed," "in," etc., which are often called "un," "us," etc. Drill on them until they are pronounced easily and correctly.

SCALE PRACTICE

Should be kept up both in figures and from the staff. The intervals, 1—3—5—8, are important, as they form the common chord, and should be sung easily. Exercises having the intervals should be written in figures upon the board, changing the order as fast as each exercise is correctly sung. Their number is only limited by the ingenuity of the teacher. The intervals of 2—4 and 4—6 come next, and should be studied as explained in paragraph 2, page 628; written exercises having these intervals to be sung from the board. Ex. 1, 3, 2, 3, 4, 2, 3, 4, 5—5, 6, 4, 6, 5, 3, 4, 2, 1—etc.

Follow with the intervals 2—5 and 5—7 in the same manner. Drill on them until the school is perfectly familiar with them. Ex. 1, 3, 5, 2, 5, 3, 4, 5, 6, 7, 5, 8—8, 7, 6, 5, 7, 5, 8, 6, 5, 7, 8.

The larger intervals will be noticed later.

RHYTHM.

Accent in music is as important as in ordinary reading, and the fact that the accent of words and sentences must agree with the

musical accent, or, in other words, the proper accent must be preserved in singing, gives us what is known as "measures," each measure being really the accent which occurs at regular intervals in singing.

To best illustrate or develop this to children, if any of the foregoing exercises be written thus: 1, 2, 3, 4, 5, 6, 5, 3, 5, 4, 3, 2, 1, 1, and the heavy figures sung louder than the lighter ones, the separation of the song into accented groups will be apparent, and only needs the further explanation that instead of heavy and light figures a vertical line, or bar, is placed at the end of each group, thus: 1 2 | 3 4 | 5 6 | 5 3 | 5 4 | 3 2 | 1 1 | , which forms what are known as "measures," the first part of each of which is accented.

Exercises may now be written in this manner, the pupils singing them, showing the accented sounds. If two sounds, alike, are tied together, thus, $\overline{1, 1}$, they become one sound, equal in length to the two, and would be sung "dō-ō" instead of "dō, dō."

Measures containing two tones of equal length, as above, one of which is loud and the other soft, is shown by the figure 2, at the beginning of the exercise. This gives us what is known as "even" measure, the only kind, for the present, we will use.

THE STAFF. (Pitch.)

In the last article the staff was introduced briefly, but must be more fully explained during this month.

We have seen, in singing the scale, that sounds are "high" or "low," as shown by the figures used to represent the tones. The term used in connection with this feature is the word "pitch," and the staff is used to designate the "pitch" of sounds, the position of the note showing whether they are high or low. On page 628 the scale was shown on the staff in three different positions, each being pitched higher than the preceding one.

Each line or space of the staff is called a degree, and therefore the last scale shown on that page may be said to be four degrees higher on the staff. The staff exercises for this month should consist in writing the scale upon the staff in seven different positions, thus (see diagram A), each of which should be sung daily until the scale is as familiar to them from one position (or pitch) as another.

Knowing that the "C" end of the pitchpipe is "8" of the first scale shown, they will readily understand what sound of *this* scale

they must sing to, in order to get 1, or do, in each of the others, as for instance, the pitch for the second would be identical with the sound of 2, or re; of the third with the sound of 3, or mi, and so on. The object of this drill is to pave the way for singing in the different keys later on, and to avoid the perplexity often encountered when new keys are introduced. By using the pointer, the same exercises, which have been sung from the figures, may be sung from these scales on the staff, the teacher pointing to such notes as he desires sung from the particular position being studied.

DIAGRAM "A."



The hand makes a very good representation of the staff: Holding up the left hand between you and the school, the little finger will stand for the first or lowest line and the thumb for the fifth or highest; the spaces being shown between the fingers. Drill as follows: supposing you are going to pitch your scale on the first line, you tell them that "do" will be, for the present, found on the little finger. "How do we get the proper sound with which to begin?" Ans.—"Sing down to 3." "All right," (blowing your pitchpipe, "C" end.) The school sings—"8, 7, 6, 5, 4, 3, me-e-do-o;" you then point to each finger, beginning with the little finger, and space in turn until 8 is reached (the space between first finger and thumb) after which you point to the place where you want them to sing, taking care to not skip more than one finger or space for the present, the larger intervals not yet having been learned. The pitch can at pleasure be changed to the next finger, or the spaces between or below, starting each time from the pitchpipe, and singing down to the degree from which it is proposed to pitch your scale, provided that you start no scale higher than the second finger.

WRITTEN WORK.

Pupils who can write should be required to draw the staff on slate or paper, and place notes, representing the scale or any parts

of it, thereon, from any pitch designated by the teacher. The tones desired may be written on the board in figures and the pupil having been told upon what degree to write the note standing for 1, he should find the proper places for the remaining tones.

Our next article will introduce and treat fully of the length of sounds.

THE STORM.

ELIZABETH FOULKE.

Haste, little birdie, fly away,
The sun has hidden behind the gray.
Out of the west the clouds roll high,
Dark and sullen across the sky.
There isn't a stir in the sulky air—
The leaves hang motionless, everywhere.

Hark, little birdie, nearer still,
The rain is falling over the hill.
The Bumble Bee to the nodding clover
Is saying his good-bye over and over.
Tree-tops bend and creak and sway,
And darkness hideth the light of day.

Ah, little birdie, tell me true,
Doesn't the thunder frighten you?
Doesn't the flash of the lightning make
Even a brave little bird's heart quake?
If I had to cling to a swaying tree
I am almost sure it would frighten me.

Birdie turns as he flies away,—
"Why should I fear?" he seems to say.
"The wind that sweeps from sea to sea
Seems like a bird so light and free ;
And thunder only the mighty cry
The storm-bird utters from out the sky."

[Written for the JOURNAL.]

The most widely-known journal in Connecticut is the *Hartford Courant*, the oldest newspaper in America. It was founded in 1764. There are some old families in the State that have taken it ever since it was published. The early files contain matter pertaining to the stamp act, the administration of Washington, and other events connected with the early history of our nation.

PRIMARY DEPARTMENT.

Edited by MRS. SARAH E. TARNEY-CAMPBELL, Supervisor of Instruction in the
Anderson Schools.

I should like to call the attention of the teachers to the article by Dr. D. W. Dennis of Earlham College, in this issue of the JOURNAL. He very kindly sent us the manuscript early in September, and several of our teachers were especially interested in the subject as he presented it. Many of them had somewhat of an indefinite notion of what should be done with this phase of the work (the provision of seeds for their dissemination) but were somewhat at loss as to how to present it. While none of the teachers, I think, followed his work verbatim they did as, one teacher suggested, take the entire body of the article and convert it to their special uses.

Many of our Third, Fourth and Fifth grade teachers are doing just the kind of work he suggests. They are very much pleased with the manner of putting the scientific facts which he presents and find them admirably adapted to the grades of work from the Second on through the Fifth. Of course the work must be presented somewhat differently in the Second and Third from what it is in the Fifth and Sixth grades, but the facts themselves and the setting which he has given them can be used in every grade. It is the teacher that should make the necessary modifications in the presentation. The teachers were also glad to have some one do just what Dr. Dennis has done in that article viz.: suggest poems from really standard literature that come in to reinforce this scientific work. I hardly know whether to say the poems reinforce the science work or the science work reinforces the literature work. At any rate, we feel that he has answered a need in suggesting beautiful selections to accompany scientific facts. This is something which is exceedingly hard to find.

**PHYSICAL DETERIORATION RESULTING FROM
SCHOOL LIFE; CAUSE; REMEDY.**

One of the subjects that is gradually forcing recognition upon parents, teachers, and school officers is the influence of the school upon the health of the pupils. A paper on this subject was read before the National Educational Association at Buffalo, N. Y.,

July 9, 1896, by J. H. Kellogg, M. D., of Battle Creek, Michigan. It is worthy a careful reading by every teacher. Below are extracts from the paper:

"Some years ago while spending a short time among the Yuma Indians in the vicinity of Old Fort Yuma, Arizona, I observed, one morning, a considerable number of old warriors and chiefs gathering in from the forests, and collecting in the old fort. Upon inquiry, I found that there was to be an Indian school meeting, the first one ever held among the Yumas.

The school had been started some two years before by Sister Alphonse and two or three other devoted Catholic sisters, who had ventured into the wilds of Arizona to undertake the experiment of educating the Yuma boys and girls. But their school had not prospered. The children had been kindly treated; they had been supplied with an abundance of food, whereas, before they were often hungry; they had been furnished with clothing, including hats, bonnets, shoes and stockings, whereas before they had roamed the forest in nakedness. The schools were furnished with all the necessary modern appliances, and the teachers labored earnestly in behalf of the students; nevertheless, Sister Alphonse confessed to me that the school was not a success, and that the old Indians were very much opposed to it.

I inquired the reason for this opposition, and was told that the Indians complained that going to school did not agree with the health of the children; that after having been in school a few months they were far less robust and vigorous than before, and that they suffered from indigestion, catarrh, and other diseases, from which they were before as free as the birds, the antelopes and the prairie-dogs among which they lived. The good sisters honestly admitted that the complaint of the old Indians was not without foundation, and that it was true that for some reason the little wild children of the forest began to lose their vigor and vivacity soon after entering school, and therefore some of the most sagacious parents had kept their children at home.

The school meeting had been called for the purpose of presenting to the old Indians the advantages of an education, so as to convince them if possible, that the children would better have an education even if the getting of it should spoil their stomachs, weaken their lungs, destroy their keen sense of smell through catarrh, impair their eyesight, dull their hearing, and

deprive them of the hardihood which had enabled them for centuries to maintain the independence which they still possessed.

I did not remain to hear the conclusion of the matter, but a few years later, in passing through the country on a visit to the Pacific coast, I spent a day among the same Indians. I found the school flourishing, to the great delight of the good sisters, but the children perishing. Their forest air of rollicking freedom had disappeared, and the evidences of physical depression and deterioration were unmistakably apparent. Civilization had conquered, and the Indians had become convinced that their children must be educated, even at the expense of health and vigor.

The deteriorating influence of school life upon children has been so long and so generally recognized that I do not need to undertake the demonstration.

INCORRECT ATTITUDES—Much has been written with reference to the influence of wrong positions in sitting in producing spinal curvature, flat chests, and other deformities which are externally visible; but so far as I know, little or no attention has been given to the relation of incorrect posture to internal displacements. * * *

Glenard (a French physician) pointed out that with the great majority of persons suffering from chronic indigestion, prolapse of the stomach or bowels, or both, is the fundamental cause of the disease, and showed that many dyspeptics may be cured by the simple application of bandage to the prolapsed organs. Professor Bouchard, the eminent French pathologist, later pointed out the fact that Bright's Disease of the kidneys, rheumatism, pulmonary consumption, and other chronic maladies, are traceable to the same cause, the foundation for these maladies being laid in indigestion, usually resulting from displacement of the digestive organs. * * *

From a careful study of these cases, Dr. Kellogg himself observes: I have become convinced that in the majority of instances the foundation of these defects is laid in childhood, and during the school-going period. * * *

It at once appears that when the student sits at his desk in the school-room leaning forward over his book, there is not only danger of acquiring a curvature of the spine and a correspondingly ugly shape, but there is an actual compression and displacement

of internal organs, which as the result of habit, produce serious disease, and cripple the individual for life.

We see a vast multitude of such cripples going about the world—persons whose round shoulders, flat chests, forward carriage of head, and abnormally straight spine, indicate prolapsed and disordered stomachs, livers, kidneys, and bowels. * * *

The physical injury which a person receives from an incorrect sitting posture, is of far greater consequence than the mere ugliness of the appearance. The posterior curvature, or abnormal straightening of the spine, resulting from an improper sitting position, is the most common of all forms of spinal curvature, but singularly enough, is not mentioned even in special medical treatises. Round shoulders and flat hollow chests are considered, but nothing is said of posterior curvature of the spine. Every round-shouldered person, every flat-chested person, has posterior curvature of the spine. * * *

Incorrect sitting may result either from defects in the seat or from negligence on the part of the pupil. A seat that is too broad naturally results in posterior curvature for the reason that no support can be obtained from the back of the seat unless the pupil leans back so far as to make his position absolutely unsupportable without relaxation of the muscles. Too high a seat drags the lungs downward, and produces a similar effect. A low desk encourages a stooped position in sitting.

If the student has a habit of sitting too far forward upon his seat, in a relaxed position, posterior curvature of the spine naturally follows. Students not infrequently acquire a slack habit of sitting in a relaxed position, with the trunk bent backward at the middle, even when the seat and desk are properly constructed both in relation to each other and the pupil. Correct sitting is a forcible position—not a strained position, but one in which the muscles of the trunk are active.

To remedy this evil requires:

1. Constant correction by the teacher of improper attitudes assumed by students, and the employment of suitable corrective exercises for two or three minutes at every change in the day's program.

2. A regular systematic course of scientific training as an essential part of the daily work of every pupil in every school in all grades. * * *

When the writer was a pupil of Professor Hartelius, the director of the Royal College of Gymnastics at Stockholm, some thirteen years ago, he was told by that eminent and experienced teacher of gymnastics that he had never encountered curvature of the spine in a single case in which the individual had had the advantage of gymnastic training during his school-going period. At that time, gymnastics had long held a prominent position in Sweden, being by law obligatory in every school. The result is to be seen in the erect and well-developed physique which is the prevalent type in Sweden. One may see on the streets of Stockholm a larger proportion of men and women with fine figure and graceful carriage than in any other city in the world.

The benefits of exercise in connection with school work are not confined to its influence upon the bodily shape. The growing period is the only time in life at which any marked changes can be effected in the physique. This is the time for enlargement of the lungs, development of the chest, and the correction of any errors, weaknesses and morbid tendencies. Systematic daily exercise, carefully adapted to the age and strength of children, produce even within a comparatively short period of time marvelous results.

I will conclude by urging upon every teacher in our public schools the importance of making a careful study of all that pertains to the physical welfare of his pupils while under the teacher's care; and I would further add the suggestion that immense advantage might be gained by the holding of parents' meetings at regular intervals, for the purpose of discussing the needs and interests of the child in both the home and the school, and securing the co-operation of parents in establishing for the child in the home such conditions as will second the efforts of the teacher in the school room in the development of a well-rounded character.

REPORT ON ARITHMETIC.—DETROIT SCHOOLS.

The following are some of the suggestions on arithmetic made by the committee appointed to report on the course of study in the Detroit schools:—

‘The following suggestions cover the work in the primary and grammar grade number work, except the parts heretofore enumerated:

- "1. No number lessons *per se* in the B class, first grade.
 - "2. Omit word partition.
 - "2. That all the work in fractions and denominate numbers in the primary grades, and percentage below the B class, seventh grade, be confined mainly to oral work.
 - "4. That written work in short division be omitted until the A class, third grade.
 - "5. That statements be made optional.
 - "6. Omit greatest common divisor from subject.
 - "7. Limit least common multiple to its uses in addition and subtraction of fractions.
 - "8. Omit measurement of circles until eighth grade.
 - "9. Omit surveyor's measure, also apothecary's fluid measure.
 - "10. Commence written work in percentage in B class, seventh grade, taking all cases.
 - "11. Omit all examples with double commisison, also examples with abatements.
 - "12. Limit examples in duties in all classes to oral work.
 - "13. Give less attention to problems in interest.
 - "14. Limit stocks and bonds to simple problems or oral work.
 - "15. Omit subject of exchange.
 - "16. Retail payments limited to two payments.
 - "17. Compound interest to be limited to two payments, and to annual and semi-annual interest.
 - "18. Omit second case in bank discount. Substitute the business method for computing this case.
 - "19. Under the general subject of proportion omit everything except simple proportion and partnership, not including element of time. Simple proportion to be transferred to eighth grade."
-

NOISE.

Sometimes the noise is so great that the visitor wonders how the teacher can hear recitations, and how the children not reciting can study.

It is not difficult to discover the cause of the confusion. In the first place there are from forty-five to fifty pairs of feet in the room, and it is necessary that these be moved often. Then there are rulers and pencils and books and papers and probably slates. All these things must be handled and unless properly moved they are noisy.

A great deal of the noise found in the primary room comes because the children do not know how to manage their own bodies. Their feet and hands are partly unmanageable, and one duty of a primary school is to teach these children this matter of physical control.

The teachers ought to know that children can not and should not be kept absolutely motionless. The children should understand that they are allowed to change their positions; their feet may be put in various positions and places, for the sake of the change so essential to little people. But they ought also be made to know that these changes are to be made without noise. The feet are to be lifted from the floor and put down quietly in the new place. Many primary teachers take a little part of each day during the child's first term to show him how to handle his feet quietly, how to put his book and pencil on the desk, how to turn the leaves of the book, where to keep the rulers, etc. These same teachers soon have a quiet school and the children twist and wriggle and change positions just as freely and readily as in a noisy school but they have to become able to lift their feet, and lay books and pencils down without dropping them.

The small amount of time spent in doing this is well spent. No teacher can do her best work if the school is noisy and if she must stop frequently to speak to the children about the noise they are making.

LEND A HAND.

[This department is conducted by MRS. E. E. OLCOTT.]

"Look up and not down
Look forward and not back
Look out and not in;
Lend a hand."

A PHASE OF LANGUAGE WORK.

That people may express written thought in a correct, clear, and pleasing way, is the ultimate end of language lessons. They must have something to say, and learn to say it well. But language work as well as reading has its "form side." For instance, if the task were to write a letter, and a pupil should have in hand the following:

Blank town, Nov. 1. 1896. Deer Miss L——: I herd yesterday that my playmate, Roy, was sick. I went to sea hymn right

away. He was very weak. His face was pail. But his ant Mary thinks he will be well enough to play ball with us next weak. Ewers truly, Harry. Could it be called satisfactory?

It will hardly do to dismiss it with: "The *language* is correct, the fault is principally in the spelling, and should be corrected in the spelling lessons." Because from one point of view, there is not a misspelled word in the letter. In the spelling book, deer is as correct as dear, herd as heard, hymn as him, etc. "Yours are pitchers," is as incorrect as "Ewers truly." The spelling, *i. e.*, the arrangement of the letters, is less at fault than the meaning, the *thought* which the words recall. However, it matters little whether one calls it the language-side of the spelling or the spelling-side of the language. The problem is how to correct it, or better, how to prevent it, for if words which sound alike but are spelled differently once become confused in the pupil's mind, long and weary is the task of making the distinction clear.

Then, too, it seems that the correct arrangement of the heading, address and signature of a letter is an easy thing to remember. But experience testifies that it is not learned in one lesson, but only from writing it over and over again. To consider that the chief end of language lessons is to teach the correct use of the forms of singular and plural, the signs of the possessive, the filling of blanks with troublesome words such as blue, blew, or through, threw, etc., etc., is a very grave mistake. But, to wholly neglect that phase is a mistake, also. It is well to have occasional lessons in which these points are emphasized, the thought for the time, being counted less important than the correct use of forms under consideration.

I.

The class had been wrestling with those treacherous words, know and no. On a certain day, their desk work had been to fill the blanks in a list of sentences. Each pupil had a hectographed copy of the list, which by the way their teacher had taken from Wyman's "Primary Language Cards for Busy Work," published by the Educational Publishing Company, Chicago. The list was as follows:

know—no.

1. Tom's brother has — slate.
2. Does he — how to write?
— m a'am bu he wants to learn.

4. Do the children — the way ?
5. Do you — it well enough to show them ?
6. — ma'am, I am afraid not.

Part of the recitation had been a test of the correctness of their desk-work, and it revealed that "know-no" were not yet fully conquered. The teacher said briskly: "You need more practice, more sentences with blanks to fill," and—tentatively—"I believe I shall let you make them for yourselves !"

A wave of interest rippled over the upturned faces.

"I wish each of you to write eight sentences, using know and no as many times as possible.

Do not write simple little sentences like:

I have no slate.

I have no pencil.

I know my lesson.

I know my teacher

But try to write good sentences, with questions and answers, like those on the card I gave you. Try to write sentences that nobody else will think of.

I shall grade them on the value of the sentence, the correct use of "know-no" and on neatness. I would rather have a list with good thought-work even if the boy made some mistakes in using know and no, than one with no mistakes, but only simple little sentences such as I mentioned.

I will examine your sentences and return them to you. Those who have good work may correct any mistakes, and copy their sentences on cards that I will give out. But, on the cards you may omit "know-no" substituting a dash instead. Thus we shall have a set of language cards of our own making; and instead of all having the same list of sentences, each one will have a different list, and made by one of his classmates."

The pupils went to work with an interest that was delightful to behold.

II.

That night the teacher carefully examined the sentences, marking with red ink those that deserved a place on the language cards. Very many sentences had to be discarded, so in order that, when the cards were finished, there might be one for each member of the class, she decided that four "red letter" sentences

should entitle a pupil to a card on which to record them. More than four entitled the author to two cards which he would number I, II, and write his *name* on both.

Some pupils had only one or two "red-letter" sentences, but the teacher planned that not even those should be unrewarded. Therefore, those who had fewer than four "red-letter" sentences wrote those sentences on the blackboard with the author's *initials* under them.

Each pupil who had a sentence on the blackboard received a card. Since there must be four sentences on each card, he copied his own work and added—selecting from the lists on the blackboard—the sentences needed to complete the number.

The pupils who had more than four "red-letter" sentences but less than eight, and who, therefore, could not fill their cards, marked II, with their own work, also copied some of the sentences from the blackboard to complete the number.

Thus each pupil who wrote even one creditable sentence felt that he had contributed to making "our language cards," and the class worked with that *interest* and earnestness that is the ideal in any kind of desk work.

III.

DESK WORK—LANGUAGE CARDS.

Below are a few of the language cards made by the class. They were written on cards cut from manilla cardboard, 5 by 3½ inches in size.

Nos. 7 and 8 show the pupil had eight sentences, and therefore two full cards.

No. 9 shows that the pupil had two cards (indicated by the II in the upper left-hand corner), but, as she had only three sentences for the second card, she copied a sentence from those on the blackboard, placing the initials by it. She was entitled to write her full name because she had more than four accepted sentences. Initials show that the youthful author had less than four "red-letter" sentences.

No. 10 represents three pupils who could give only their initials.

Give these lists to your language class and see if they do not take special interest in them because some other *children* "made them up." Encourage them to write some such sentences themselves for your inspection.

1.

know—no.

1. — I have — more roses; they are all faded.
2. Do you — how to solve these problems?
3. Do you — where the Eskimo lives, May? — I don't.
4. Are there — more books on the table?

GRACIE STRUTT.

2.

know—no.

1. Have you — book, Gracie?
2. — I have — book.
3. Do you — what kind of a book you need?
4. I have n't asked Miss Eva what kind to get.

MARY GUERNSEY.

3.

know—no.

1. Do you — how the sun moves?
1. — but I will learn next year.
3. Do you — when school is out?
4. — but I am going to ask the teacher, and then I shall —.

ALLEN BARNETT.

4.

know—no.

1. Do you — where the Hudson river empties? — ma'am, but I will find out.
2. Do you — how to divide? If you do not — you had better learn. — I do not. Well, come with me and I will show you.
3. Do you — Victoria is Queen of England? —, and I am glad you told me.
4. Do you study [Physiology, or do you —? —, I do not study it, but when I get in the fifth grade I will.

OLIVE HIKES.

5.

know—no.

1. Does he — what I am doing?
2. —, he does not —.
3. I — what he is doing.
4. Do you — where the British Islands are? —.

CECIL SHARP.

6.

know—no.

1. I — the man that has the store, but he does not — me.
2. Does the man — what I want with him?
3. —, he does not —.
4. The Eskimos live up in the cold country, but they do not — anything about us.

EARNEST EGAN.

7.

I. know—no.

1. Do you — the largest city in the world?
2. — ma'am, but Paris is next to the largest.
3. Do you — what time it is?
4. —, but I think it is about 4 o'clock.

WALTER HAYMAKER.

8.

II. know—no.

1. Do you — which is the youngest of the "Seven Little Sisters?"
2. —, I do not —, but I would like to.
3. Which of the "Seven Little Sisters" lives on a mountain, or do you —?
4. —. Will you tell me, please?

WALTER HAYMAKER.

9.

II. know—no.

1. Do you — how to change that problem to a whole or a mixed number?
2. —, but I am going to learn.
3. Have you ever seen the little girl who lives in the desert? —.
4. Do you — whether the little brown baby lives in a cold or a warm country? —.

DAISY MCGOWAN.

L. D.

10.

know—no.

1. Do you — an insect that makes a web house?
2. —, I do not —. What is it? It is a spider. P. H.
3. Please do not go fishing, I — you will be hurt. G. R.
4. They — not what they do. S. B.

FALL BUSY WORK.

MATERIAL—LEAVES.

Leaves, leaves; what a world of leaves! and they can be obtained without number, now their life's work is done. In the spring, we did not feel it quite right to take them, but now that the tree has no more use for them we can have them in abundance. Their various shapes and outlines afford a mass of material for busy work.

In giving busy work to children, we should be exceedingly careful lest they gain nothing from it. The first thing to do is to arouse an interest and enthusiasm in the work we desire them to do. We should aim to cultivate or develop the powers of the child and cause him to gain information, rather than to occupy or entertain him.

CLASSIFICATION.

1. *Kinds of leaves; simple and compound.*—Have the child draw and paint. Take two leaves very different in shape, *e. g.*, the pear and box-elder. After he has drawn or painted these, he will be prepared for the second step—that of classifying under the heads, simple and compound. He can select from a pile of leaves five simple and five compound, or a greater or less number as directed.

2. *Veining of leaves; netted-veined and parallel-veined.*—Place in a large pile netted and parallel-veined leaves and have the pupils select a certain number of each and place them. Children should in all cases be able to explain clearly why they select as they do.

3. *Shapes of leaves; lance-shaped, heart-shaped, round and oval.*—As soon as the children know these forms, leave them to select from a mass, and place in respective piles the four kinds.

4. *Edges of leaves; saw-toothed, wavy and jagged.*—Leaves should now be arranged according to their edges, and as this is a little more difficult, we have selected the simple and most common. Close observation, however, will determine all seeming difficulties.

Drawing, painting, number work and written stories should go hand in hand with this classification work and should be done without direct aid from the teacher.

Each child should be encouraged to make a collection of autumn leaves, say one leaf illustrating each of the points he has learned

to observe. He will provide himself with common brown paper which can be converted into a book. On each page one leaf should be mounted and below the leaf the name, date and special features recorded. For example, the teacher will state that to morrow parallel-veined leaves will be mounted and that each child must bring his leaf. This should all be done during busy work period.

MIDLAND SCHOOLS.

AMY BROWN.

DEPARTMENT OF PEDAGOGY.

Conducted by **ARNOLD TOMPKINS**, Chair of Pedagogy, University of Illinois, at Champaign.)

PUN, PARADOX AND PEDAGOGY.

The problem of all thinking is to find unity in diversity, or diversity in unity. The highest effort of thought is that which binds the greatest diversity into the closest unity.

Sometimes things seem so diverse that they are taken to be utterly contradictory. Yet such contradictories must be unified if the universe be a universe. Two dependent relatives point clearly to a unity which transcends them and in which they are related. Two contradictories must have some inclusive unity through which the contradiction arises. The highest truth is found in the identity of contradictories; that is, in the closest unity of the greatest diversity; such as that between subject and object, spirit and matter, individual and universal.

A paradox is the strongest figure of rhetoric, since it affirms the identity of contradictories. The Bible affirms that one may find his life by losing it. Thus finding the life and losing it constitute one and the same process; not two processes but one with two phases which seem to be utterly contradictory. Losing and finding seem irreconcilable; and yet we are assured that the process of finding is a process of losing, and that the process of losing is a process of finding. And this is literally true; it is not a hyperbole, but a paradox.

And thus it may be soberly affirmed that life is through a process of death, and death through a process of life; both are inseparably identified in a process. It may be truly said that the end is the beginning, and the beginning is the end, and this is because "I am Alpha and Omega." It must be that the ideal is real, and

the real is ideal. They do not stand apart, but are identified in the same thing. All true egoism is in and through altruism; and all altruism is egoism. They are inseparably connected through being utterly opposed in the process of spiritual life. Subject and object are identified in the ego through their opposition.

To think in paradoxes involves the subtlest and boldest act of the synthetic judgment. The same act, in a modified form and lower tension, is found in the use of all rhetorical figures, including wit and humor. We laugh in noting the unity of incongruities. Thus wit and humor appear to be highly rational. Man is the only laughing animal; and a keen sense of humor is a favorable sign of a quick and firm intellect. It is significant that the word wit means to know. Wit and humor in being usually joined with pathos, marks the fact that the power of close and subtle thinking is accompanied by the capacity for the deepest feeling. The enjoyment of wit and humor is pure rational enjoyment; is more of spiritual life as against the carnal life. Both for the sake of cultivating the synthetic judgment in perceiving congruity through incongruity and training the capacity for rational enjoyment, the schooling in wit and humor should be as carefully provided for as that in book-keeping or chemistry.

Whatever be the figure of rhetoric, it is obvious that there is unity of what are ordinarily assumed to have nothing but difference. While the paradox affirms opposition in unity, the other figures bring into unity objects currently assumed to have no connection, but not opposed. Hence the other figures are not so strong and bold as the paradox. When Whittier says, "Melt not in an acid sect the Christian pearl of charity," he finds a point of identity between acids and sects, and pearl and charity. These objects are not consciously set apart as opposed to each other, yet in our ordinary thinking they are not identified at any point. Yet it is quite clear that both acids and sects have the power of dissolving; in this they have their identity with all their obtrusive differences.

In this, I mean only to suggest an opportunity, usually overlooked, of training the mind in its highest form of unifying activity to the subtlest perceptions of identity in difference.

THE CHAMBERED NAUTILUS.

(Continued.)

"The life of man is a self-evolving circle, which, from a ring imperceptibly small, rushes on all sides outward to new and larger circles, and that without end. The extent to which this generation of circles, wheel without wheel, will go, depends on the force or truth of the individual soul. For it is the inert effort of each thought, having formed itself into a circular wave of circumstance, as, for instance, an empire, rules of art, a local usage, a religious rite, to heap itself on that ridge and to solidify and hem in the life. But if the soul is quick and strong, it bursts over that boundary on all sides and expands another orbit on the great deep, which also runs up into a high wave, with attempt again to stop and to bind. But the heart refuses to be imprisoned; in its first and narrowest pulses, it already tends outward with a vast force to immense and innumerable expansions."

In this "The Chambered Nautilus" finds a parallel; here again, the individual life, limited by its own creations, bursts through the finite and comes out into the infinite; yet, even in the very first moment of that ecstasy born of freedom, it by the necessity of its own being transforms the infinite into finite, thus setting another limit to its growth. Still again and again will the "inner impulse rend the veil of that old husk" and the soul, thrilled at the moment of its release from the finite by the presence of the infinite which it feels but cannot see, continues its fruitful and fruitless struggle for freedom.

The above quotation like "The Chambered Nautilus" expresses its truth through the medium of an image, and as the embodiment in each gives freedom to the thought, each is a poem. The difference in the intensity and force of the two forms of expression and their advantage in strength and beauty over their interpretation in prose is striking. The mind in picturing circle without circle can *feel* the bondage and freedom and the never ceasing struggle between what the soul has and what it has not. The imagination can pile circle on circle till the weariness resulting impresses the mind with the limitless truth; while the freedom for clear and complete comprehension is denied by the language of the intellect. The individual places himself at the center and vividly realizes the truth by clashing with his bounds.

The circle in becoming a type of life has become one with the individual; it is only one of the forms in which his outgoing energy manifests itself; it is no longer a material thing, but now it speaks and reveals to man the nature of life and thus claims kinship with the soul. But in comparison with the Nautilus, it lacks intensity and beauty of expression. The circle, though "self-evolving," to us lacks choice and freedom. Try ever so hard, the imagination cannot fill it with a conscious life that feels and wills. The Nautilus comes closer to the heart; its struggle, its hopes and disappointments, its joys and sorrows are more like my own and between us there is a warmer sympathy. To me it is more beautiful than the circle because in it I feel that the conflict between my own real and potential self is more perfectly realized.

Since through the embodiment, the student must come into touch with his own life struggle, in reading the poem it is necessary first to paint clearly the Nautilus in his home. The materials for the picture are given in the poem and only those parts and attributes are given which aid in making it a perfect embodiment. To send the student to the cyclopedia for an article on the Nautilus deprives him of the opportunity of constructing his picture from a close interpretation of the language in the poem. This common attempt to surround the subject with interest results from a lack of appreciation on the part of the teacher of the beauty and meaning that exists within the subject. Going beyond the poem, in order to interpret it, assumes that it is not complete in itself, and, in doing this, the teacher violates the law of unity in discourse by dragging in materials which the poet did not care or dare to use.

The creation of the type in this poem is itself a development. The poet does not immediately enter into communion with the Nautilus for in the beginning it has no message to impart. In his first conception, it is not a type of life but belongs to the lowest plane of being. From here it undergoes a gradual transformation, rising higher and higher in the scale of life till it bursts forth into speech and song.

In the first stanza, it is merely a "ship of pearl" transformed by the imagination into that with which it is more closely associated. Nothing in this stanza indicates that it is a living thing, with possibly the exception that "it flings on the sweet summer wind its purple wings;" yet this might be said of any venturesome

bark that spreads its sails to the breeze. In the second stanza, the form of the ship has not quite disappeared, but it is fading and in its place there appears to the poet a "dim dreaming life;" and the fact that it is dim and dreaming is evidence that it cannot yet reveal to mankind the message of the writer. In the third, the "dreamer" is transformed into a "toiler;" the Nautilus has changed from a passive into an active life, is gradually taking on the form of personality with the power to shape and determine itself, as indicated by what it does and the use of "he." In the preceding stanzas where it is spoken of, the impersonal form occurs but henceforth only the personal pronoun is used. In the imagination of the poet, it is now an active being that inhabits a dwelling of its own construction out of whose "door" the dweller "steps" at will. If anything were wanting to complete the personification, it is furnished in the next stanza. This little mollusk, which at first was separated from man by a seemingly impassable gulf, at last, through the transforming power of the poet's imagination, claims kinship with the higher race and standing face to face with the soul, the "child of the wandering sea" from human "lips" now sings a paean of such wondrous power that the chords in the heart of humanity vibrate in sympathy with the song:—

Build me more stately mansions, O my soul,
As the swift seasons roll !
Leave thy low vaulted past !
Let each new temple, nobler than the last,
Shut thee from heaven with a dome more vast,
Till thou at length art free,
Leaving thine outgrown shell by life's unresting sea !

J. E. MCGILVREY.

Abraham Lincoln was at one time a clerk in a country store, and among other stories told of his service, this is interesting. One evening he had put up the shutters and was about to turn the key in the lock when a woman came and asked for a half pound of tea; he hurriedly lighted a lamp and waited on her. In the morning on entering, he saw that the scales had only a quarter pound weight. He immediately weighed out another quarter, locked the store and went to the house of the purchaser and gave it to her.

PROGRAM FOR THANKSGIVING DAY.

[Prepare for Thanksgiving by interesting the children in the subject beforehand. Have your pupils find out all they can about Thanksgiving; but first of all, get into the spirit of it yourself. Decorate the school room with fruit, flowers and pictures. The children will easily make the room beautiful with fruits, vegetables, grasses and grain. Here the country schools will have the advantage. In some schools the children bring a Thanksgiving offering for the poor: Invite parents and friends to share the pleasures of the day with you.]

MOTTOES FOR THE BLACKBOARD:—

"Do not wait for a special day in which to be thankful."

"He who waits for Thanksgiving Day to be thankful, will not be thankful when it comes."

"Thanksgiving makes a crust sweet; the want of it makes a turkey bitter."

1. SONG Air—America.

The God of harvest praise;
In loud thanksgiving raise
Hand, heart and voice.

The valleys laugh and sing,
Forests and mountains ring,
The plains their tribute bring,
The streams rejoice.

The God of harvest praise;
Hands, hearts and voices raise
With sweet accord.

From field to garner throng,
Bearing your sheaves along,
And in your harvest song
Bless ye the Lord.

—James Montgomery.

2. READING OF PRESIDENT'S PROCLAMATION..

3. READING OF GOVERNOR'S PROCLAMATION.

4. RECITATION Thanksgiving Day.

November has come with its festal day
The sweetest home-feast of the year,
When the little ones mingle in frolic and play,
And share in the Thanksgiving cheer.

And let us remember that tale of the past,
Of the Pilgrims who gathered their band,
And offered up thanks for the corn when at last
It waved o'er the famishing land.

For hunger had wasted those strong, patient men,
Who struggled and labored in pain,
And the blessing of plenty which gladdened them then
Gave courage and hope once again.

5. RECITATION:—

We learn it all in history you didn't think I knew?
Why, don't you s'pose I study my lessons? Course I do.
The Pilgrim Fathers did it, they made Thanksgiving Day.

Why? O, I don't remember; my history doesn't say,
Or p'rhaps I wasn't listening when she was telling why;
But if the Pilgrim Mothers were busy making pie,
I s'pose they couldn't bother, and so that was the way
It happened that the *Fathers* made our Thanksgiving Day.

—Selected.

6. READING The First Thanksgiving in America.

When the brave ship "Mayflower" landed her one hundred and two passengers at Plymouth on the twenty-first of December, 1620, they found the country deserted. Not an Indian could be seen, and there was no one to dispute their right to claim the soil. They went right to work, for they were brave good men, with the love of God in their hearts, and they believed that He was with them in the new life they had chosen. Every man who had a wife and children began to build a small cabin for his family. Men who were not married, or whose wives had not yet come, were taken into the different families. By the time seven houses were built there was no need of any more. Sickness came among them. Half their number died. Sometimes two or three died in one day. To add to the horror of the situation, while the sick lay helpless in bed, Indians were lurking near the settlement, watching their movements. They would make signs of defiance from a distance, but when pursued would vanish from sight. The sad little settlement was one day astonished by a loud voice crying in broken English, "Welcome, Englishmen." This was Samoset, who afterward brought to the settlement his chief, Massasoit and Squanto, who interpreted for them. In this first interview, Governor Carver and the Indian chief exchanged greetings by each kissing the other's hand. Massasoit promised that neither he nor his tribe should harm the Plymouth people, and the governor that his people should protect the chief against his enemies. In April the "Mayflower" returned to England, but not one of the brave Pilgrims went back. Not for peace and plenty would they give up their freedom or their right to worship as they believed. After the ship was gone, they were busy in the planting, and twenty acres of Indian corn, six acres of peas, and some barley were put under cultivation. In the autumn, they gathered their first harvest. The peas were not good, but the barley, wheat and corn yielded fairly. The crops were really a success, and with light hearts the Pilgrims were ready to keep their first "Thanksgiving." History does not mention all the "goodies" that they had for their first Thanksgiving dinner. We do know that they had turkey, for we are told the governor sent four men out to shoot wild turkeys and other fowl, and the men came back with enough to last them nearly a week. Deer were also killed and there was plenty of venison. When the dinner was planned, they invited their friends—the Indians—to come and help them eat it. And they accepted, and Massasoit and ninety of his men came and ate with the Pilgrims their first Thanksgiving dinner in America.

[Selected from an article in Goldthwaite's *Geographical Magazine*, November, 1891.]

7. ESSAY.....Why I Should be Thankful.
 8. RECITATION.....The Thanksgiving Dinner.

Poor little Honora Mullally,
 At the close of the Thanksgiving Day,
 Was standing in front of her alley;
 A-watching some children play.
 Her gown was a wonderful garment,
 All patches from shoulder to hem,
 And her hat and her shoes—well, I beg you'll excuse
 Any further remarks about them.
 But poor little Honora Mullally,
 Had a face just as bright as could be,
 And no flower in meadow or valley,
 Was ever as pretty as she.
 And so thought an old woman, who passing,
 Stopped a moment to smilingly say:
 "Why bless your dear heart, I am sure you have had
 A very good dinner to-day."
 "Yis, indade," said Honora Mullally,
 "I did; for my friend Mrs. Down
 Had a hape of sweet-taters that Sallie,
 Her sister, baked lovely and brown,
 Wid—oh, ma'am, if you could but have seen it!—
 The fattest and foinest of hins.
 And they giv' me the gizzard and neck of that hin,
 And all of the sweet-tater skins."

9. RECITATION.....Thanksgiving Letter.

<p>A letter once poor Katie wrote, And on its way it sped One bright Thanksgiving morning. 'Twas thus the letter read:— "O, farmer man! O, farmer man! Do please to come this way, Because we want a turkey On this Thanksgiving day. "O, do you think that none of us Here in this narrow lane Have nothing to be thankful for, In spite of toil and pain? "I have two hands with which to work, Two feet with which to walk, And I can hear, and I can speak, And with my mamma talk.</p>	<p>"And when I'm cold and hungry, I then can sing a song And think I'm warm. When head- aches come They never do last long. "With so much to be thankful for I'd keep Thanksgiving Day; So bring a turkey, and some time You'll surely get your pay. "Leave it at Bragg's lane, number five, And please wait for my thanks." The postman gave this letter To crabbed Farmer Hanks, Who hung his biggest turkey That day on Katie's door. With it this note: "You've made me, child, More thankful than before."</p>
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—Miss Mary Douglass.

10. SONG.....Air—"I love to Tell the Story."

We thank thee now O Father,
 For all things bright and good,
 For seed-time and for harvest,
 For life and health and food.
 Accept the gifts we offer,
 For all thy love imparts,

And what thou most desirest,
 Our humble thankful hearts.
 We love to thank thee ever,
 We love to sing thy praises,
 To sing the old, old praises
 On this Thanksgiving Day.

11. RECITATION FOR TWO LITTLE GIRLS.

FIRST GIRL:

Here's Autumn with her horn of plenty,
 Just see the fruits and grain !
 Who was it brought them? Two kind friends,
 The Sunshine and the Rain.

SECOND GIRL :

And Autumn lifting high her horn
 Now lets the good things fall;
 Some into every home she sends
 A bit of joy for all.

BOTH GIRLS :

And for the home with friends to love,
 For clothes, for health, for grain,
 We thank our Father, He who sends
 The Sunshine and the Rain.

—Selected.

12. RECITATION.....Dot's Thanksgiving.

I'm sure no dog in all the world is half so rich as I,
 With goose bones and turkey bones and crust of chicken pie !
 My little mistress came to me, and said, in her sweet way,
 "Now Dot, you must be thankful, dear, for 'tis Thanksgiving Day:
 You must be thankful for your home, your friends, and your good health—
 The minister said so, Dot, because these things are untold wealth !"
 That's what my little mistress said, and I couldn't understand.
 But I understood the dinner that she brought me—it is grand !
 So with goose bones and turkey bones and crust of chicken-pie,
 What dog in all the world, I say, is half so rich as I !

13. RECITATION.....A Thankful Soul.

I take life jest as I find it,
 If its hot I never mind it;
 Hunt around for shady trees
 An' jest whistle up a breeze !
 If it's snowin'—why I go
 Jest a-skimmin' crost the snow !
 (Ever try how good it feels
 In a wagon off the wheels?)
 Spring or winter, summer or fall,
 I'm jest thankful for 'em all !

Folks say this world's full o' strife;
 That jest 'livens up my life !
 When the good Lord made it, He
 Done the best fer you an' me—
 Saw the sky and so much blue,
 An' rolled up a cloud or two,
 Give us light to sow an' reap
 Then throwed in the dark fer sleep.
 Every single drop of dew
 Twinkles on a rose for you.

Tell you ! this world's full o' light—	I take life jest as I find it—
Sun by day an' stars by night;	Hot or cold, I never mind it:
Sometimes sorrow comes along,	If it's a sunshiny day
But it's all mixed up with song.	That's my time for makin' hay;
Folks that always make complaint	If it's rainin,' fills my wish—
They ain't healthy—that they ain't?	Makes the lakes jest right for fish;
Some would jest live with the chills	When the snow falls white as foam,
If it wern't for doctors' bills?	Then I track the rabbits home.
Always findin' fault with things—	Spring or winter, summer, fall,
Kill a bird because it sings.	I'm jest thankful fer 'em all !

—*Frank L. Stanton in Demorest's Magazine.*

14. TEACHER—Let us all be thankful:

Whole School—

1. That we live in this beautiful world.
2. That the harvest has been bountiful.
3. That we are to have a Thanksgiving dinner.
4. That we have kind parents.
5. That we have work to do.
6. That the Father cares for us.

*All—*For home, friends and native land, dear Father, we thank Thee.

15. SONG.....Air—Greenville.

To the Giver of all blessings	For the wealth of golden harvests,
Let our voices rise in praise,	For the sunlight and the rain;
For the joys and countless mercies	For the grandeur of the ocean,
He hath sent to crown our days;	For the mountains and the rain;
For the homes of peace and plenty,	For the ever-changing seasons
And a land so fair and wide;	And the comforts which they bring;
For the labor of the noonday,	For thy love, so grand, eternal,
And the rest of eventide.	We would thank thee, Oh, our King.

EDITORIAL.

IT HAS just been decided that the next session of the National Educational Association will be held at Milwaukee, July 6 to 9, 1897.

A VISIT.

The writer recently spent an afternoon in School No. 2, Indianapolis. Miss Margaret Hamilton is the efficient principal. The building was in perfect order, and most of the rooms were well provided with flowers and plants. The pupils passed in and out in perfect order, and yet there was no keeping step or marching. Miss Hamilton has tried the music and marching plan, but says that she very much prefers her present method. She says it is much less work for the teachers, and is just as orderly and just as expeditious. As time was limited, only a part of the twelve schools in the building could be visited.

We first heard a class in advanced reading. The clear and distinct expression indicated that the pupils had been well taught in the lower grades. There was a little lack in expression—a failure on the part of the pupils to enter into the spirit of the author—but the teacher was aware of the defect, and was using the most effective means of remedying it. The teacher was composed, and seemed to have clearly in mind just what she wished to do and a plan by which it was to be done.

Next, we heard a beginning second-year class in number. One problem given was: If a woman has \$14 with which to buy soap, how many boxes of soap can she buy if each box costs \$4? The teacher had the pupils represent the dollars by circles on their slates. These circles were placed in a straight line in groups of four. There were, of course, three groups and two dollars over. Next, a box was drawn under each group. Next, the solution was stated in figures. Finally came the "story," which was the answer to the original question.

The whole thing was skillfully done, and the teacher showed unusual ability. If any criticism could be made it would be to the effect that the teacher did a little too much of the work herself. Probably, had time permitted, another similar problem would have been given, and the children left entirely to themselves to trace the solution through the different steps, and then no criticism would have been thought of.

This opens the way to say that many teachers, if not most teachers, help their pupils by questions and suggestions more than they know and more than they intend.

We then heard a reading lesson on "The Baby Oak." Each child was given an acorn, which was examined and talked about. Then the teacher placed on the black-board a number of words with which the children were made familiar. Afterward each child was given a printed leaflet containing "stories" about "The Baby Oak." We afterward learned from the Principal that the teacher was the author of the leaflet and that she had written many such.

The words learned from the board were the more difficult words found on the leaflet. It is hardly necessary to add that the reading from the leaflet was expressive and "natural." Had there been no leaflets, doubtless the teacher would have taken the children's own "stories" about the acorn and written them upon the board and allowed them to constitute the reading lesson. This work was well done.

A class in mental arithmetic in an intermediate grade was next heard. The work in rapid computation was remarkable, and all the mental work was well done. In this room we heard two or three recitations appropriate to the season. This teacher asks each pupil to commit some selection appropriate to each season and then from time to time they are recited. This is an excellent method of storing the mind with beautiful thought.

The last class visited was one in geography, or, rather in geography and history combined. In the Indianapolis schools these two subjects are now universally taught together. This is in line with the best thought. When these branches are studied together each supplements the other, and the two

are learned more easily than either by itself can be learned. The history side gives excellent opportunities for "talking" lessons. Thus by this method geography, history and language are effectively *correlated*. The lesson listened to was skillfully conducted.

Altogether, the afternoon was pleasantly and profitably spent.

SCHOOL LEGISLATION.

State Superintendent Geeting is now hard at work on his report to the legislature. Within a few weeks he will issue, in pamphlet form, that part of the report that pertains to new legislation. The superintendent will recommend a few important changes in the present law. He will recommend a change in the county superintendency law. He will urge that a law be passed similar to the one recommended by the educators of the state two years ago. He will urge that the term be made four years instead of two, and he will also ask for a qualification clause, not only for county superintendents, but for city superintendents, also. He will recommend that the number of examinations for licenses be reduced to six in each year. He asks, further, that the manuscripts, together with the county superintendents' estimate of "success," be sent to the State Superintendent's office for examination, and that all licenses be issued by the State Superintendent, and that all licenses be State licenses. This would make the standard of qualification uniform throughout the State, and it would give the county superintendent the much-needed time for visiting schools. The additional expense is to be met by an examination fee of fifty cents.

The superintendent devotes quite a little space to the district library question. He believes in *district* libraries. The suggested law would establish a relation between the state library and the local libraries, and make the state library much more useful to the people of the state than it now is.

As is well known, Mr. Geeting has been giving much attention to town and township high schools. He notes the very large increase in attendance on these schools within the past two years, and asks for some legislation that will make them still more efficient. He recommends that the State Board of Education be given power to recognize the certificates and qualifications of educators coming from other states.

It is the plan of the superintendent to get these recommendations into the hands of the people and the legislators at as early a day as possible, that they may be studied. He deems this necessary in order to get any changes made by the next legislature.

GEORGE DU MAURIER.—WILLIAM MORRIS.

Since we last appeared before the readers of the JOURNAL, two distinguished men of letters have gone from us. George du Maurier, known the length and breadth of the land as the author of *Trilby*, died suddenly and just as he had achieved wealth and a name. His death, some aver, was the result of excitement attendant upon success. He earned his place in literature late in life, though in earlier years, he had won a reputation as an illus-

trator. The extraordinary success of Trilby was a great surprise even to himself. The plot of Trilby was offered by Du Maurier to Henry James, who declared that it was too good to give away and he urged his friend to develop it himself. This was done and the general reader knows the result.

"The Martian" now running in Harper's Magazine was completed before its author was called away. That serial as it is unfolded month by month will have a sad and an unusual interest.

WILLIAM MORRIS, known in his later life for his socialistic sentiments, in earlier years wrote verses of rare grace and sweetness. His longest and most sustained work is "The Earthly Paradise." After the death of Lord Tennyson, his name was mentioned in connection with the vacant laureateship. His book, entitled "News from Nowhere," is in the same line of thought as Bellamy's Looking Backward and classed him at once with leaders of socialistic thought. Each man has left a great gap behind him.

ARBOR DAY.

In last month's JOURNAL, we gave an Arbor Day program, and urged the observance of the day. If for any reason any school failed to celebrate the day, it is not yet too late and will not be for a month. Trees planted in November stand just as good a chance to grow as those planted in October. The following is the Governor's message on the subject:

"It has become a beautiful and growing custom in many of the States of the Union to appoint a day for the planting of trees by the children of the schools and other citizens. This day has become known as Arbor Day. Therefore, I recommend to the children and teachers of the public schools of Indiana that Friday, October 30, be set apart for this purpose and that encouragement be given to the planting of trees, shrubs and vines, that many of the school yards of the state may be beautified and robbed of their barrenness.

"Beautiful lessons are taught in the unfolding of leaf and blossom, and from the children thus observing the day, encouragement may be given to the general public to beautify and adorn their homes, and a check given to the careless ax and reckless destruction of the forest growth of our State."

"THE INDIANAPOLIS PEDAGOGICAL SOCIETY" is the name of a new organization of Indianapolis teachers. The purpose of this organization is the study of educational principles. It costs one dollar to become a member and yet the opening meeting showed *eighty-one* enrolled members. The probability is that by the time of the second meeting the membership will reach one hundred. Miss Mary E. Nicholson, principal of the Indianapolis Training School, is the leader, and all who know Miss Nicholson concede her the leadership by merit. The plan is to spend some little time in studying the history of the Greeks as a foundation on which to base further study. Miss Nicholson said in her opening talk that the telescope and the microscope had opened up new worlds and that the advance in discovery and invention in the last two thousand years has been almost beyond estimate.

and yet in some things, the Greeks of more than two thousand years ago surpassed the present age. In all that time, the human mind and the human heart have not essentially changed. The Greek standard of the beautiful and the true is still the study of the masters. The Greek ideal of man, physically, mentally and morally is still an ideal. The Greeks produced many specimens of manhood of a high order measured by the highest standard of to-day, and it is fitting to inquire as to what kind of education produced them. The Homeric ideal man is "a speaker of words and a doer of deeds." The speaker of wise words and the doer of noble deeds is still the ideal citizen. The Greeks believed in noble birth. Their most noted heroes descended from the gods. We recognize the fact that it is a good thing to be well born. The Greeks believed in thorough training and beginning with the physical, they trained persistently in right action. We believe in learning to do by doing. "Do the deed and ye shall know of the doctrine." The Greeks believed in sound instruction and were the first to study the nature of mind. *We* are now just beginning to study the child and adopt our methods of instruction to the natural order of his development.

NEVER tell any child under six years old to conceal anything, even though it were a pleasure you were planning for some one you love. The clear sky of childlike open heartedness must not be covered even by the morning glow of shame; and your instructions will soon teach him to add secrets of his own to yours. The heroic virtue of silence requires for its practice the powers of ripening reason. Reason teaches us to be silent; the heart teaches us to speak.—*Jean Paul*.

DO NOT FORGET.—Those readers of the JOURNAL who did not pay for it at the time they subscribed will remember that they agreed to pay on or before Jan. 1, 1897. Many arranged to pay the agent at the annual association the latter part of November. No one is compelled to take the limit of the time agreed upon and the editor will be glad to be surprised by receiving the amount due at any time. This of course is not asked but it will greatly oblige.

QUESTIONS AND ANSWERS.

STATE BOARD QUESTIONS USED IN SEPTEMBER.

READING.—1. Show how the knowledge of the words *dear, bread, till, know, home* and *useless* will help the members of a second reader class to learn, without help from any one, the words *near, spread, killed, row* and *homeless*.

2. "The expressing of the thought is a secondary matter; if the thought is fully comprehended the oral expression of it is comparatively easy." Discuss this statement.

3. If the above statement is true, what criticism would you make on the teacher who has the pupils "stand and read" as the first step with a new lesson

4. What is "the construction of a picture" in reading? Is this work important? Why?

5. Mention three essential elements which must enter into a literary gem suited to second and third grade pupils.

6. Some school readers are made up with *short selections* from masterpieces; others from a few *complete* masterpieces; which do you prefer? Why?

ALCOHOL AND NARCOTICS.—1. Why should the use of light wine tend to the production of gout, and the stronger alcoholic drinks more especially attack the important organs of digestion?

2. How does the use of alcohol, in its earlier stages, tend to clog up the blood vessels, while its continued use almost destroys the power of coagulation in the blood?

3. Why should the constant use of alcohol tend to lessen the higher brain powers, and increase the merely animal one?

4. The experience of physicians seems to show that the evil effects of tobacco are more certainly hereditary than those of alcohol. Why should this be so?

5. What are the effects of opium and narcotics upon the circulatory system?

GEOGRAPHY.—1. Why should the study of geography be prosecuted with direct reference to the earth being the home of man?

2. How does the tendency of water to occupy greater space when frozen assist the efforts of agriculturists in cold countries?

3. Why should the tendency of migration in the United States be north-westwardly?

4. What influence upon the growth of Canada has the fact had that it controls the entire outlet of the great lakes through the St. Lawrence river?

5. How can you account for the fact that the three largest seaports of the world are upon otherwise unimportant rivers?

6. Are there any geographical reasons why the present condition of Turkey should, by the other European powers, be allowed to continue? Name them.

7. Name three mineral products of Pennsylvania, and show how they have promoted the wonderful prosperity of that state.

8. Both Venice and Holland have many canals which serve as highways; how do you account for the different characteristics of the inhabitants of the two countries?
(Any seven.)

PHYSIOLOGY.—1. Define hygiene.

2. Describe the dermis.

3. What are the functions of the auditory ossicles and the tympanum?

4. What is the function of the cornea?

5. What are the organs of touch and how are they distributed over the body?

6. What is a reflex centre?

What is the germ theory of disease?

8. Under what circumstances and in what quantities can alcohol be administered in safety? *(Any five.)*

ARITHMETIC.—1. At what period in a child's school life would you introduce the subject of U. S. money? Show how you would make the application of fundamental rules to U. S. money.

2. What advantage in arithmetical work is found in the introduction of bills? Show your view by using a concrete example, and discussing it.

3. Show how a pupil may be led to comprehend clearly the definition of (*a*) square, (*b*) rectangle, (*c*) triangle, and (*d*) circle.

4. What advantage is found in concrete problems over abstract?

5. For what sum must a note be drawn at 4 months that the proceeds of it when discounted at a bank at 7 per cent. shall be \$875.50?

6. What must be the dimensions of a cubical box to hold 2,000 gallons?

7. A merchant holds two notes against a customer—one for \$243.16 due May 6, 1896, and the other for \$178.84 due September 26, 1896. How much cash will cancel both notes October 11, 1896, money being worth 8 per cent.

8. James H. Smart buys a bill of merchandise at cash price, to the amount of \$1,486.90., and gives in payment his note at 4 months, at $7\frac{1}{2}$ per cent. Find face of note.

9. The sides of two squares are 6 feet and 10 feet, respectively. How do they compare in area? In perimeter?

GRAMMAR.—

“Ay, call it holy ground,
The sod where first they trod;
They left unstained what there they found;—
Freedom to worship God.”

1. Select the subordinate clauses and state how each is used.

2. State the entire subject of each principal clause.

3. How are “unstained” and “there” used?

4. What is the case of “soil”? of “freedom”?

5. How is the infinitive used in the above sentence?

6. What does tense mean? What thought is implied by the name of each tense?

7. Give two examples in which the name of the tense does not express the time thought.

8. Explain the person and number of the verb.

9. Write a business letter.

10. How would you attempt to correct the errors in the language of your pupils? *(Any four, not omitting number 9 and 10.)*

THE TEMPEST.—

“The cloud-capped towers, the gorgeous palaces,
The solemn temples, the great globe itself,
Yea, all which it inherit, shall dissolve,
And, like this unsubstantial pageant faded,
Leave nor a wrack behind.”

1. One writer calls this the sublimest passage in Shakespeare. What do you see in it to justify this view?
2. Near the beginning of Act V is a passage of thirteen lines in which Prospero states a very high principle of action. Explain this passage.
3. On what ground, as set forth in Act V, does Prospero forgive Alonzo, Sebastian and Antonio?
4. The last utterance of Caliban in the drama is this:

"I'll be wise hereafter,
And seek for grace. What a thrice double ass
Was I to take this drunkard for a God,
And worship this dull fool."

Point out in your own language the new view of life acquired by Caliban.

5. What do you consider the rhetorical and literary excellencies of this play?
6. As a story, what elements of interest do you discover in it?
7. Is it suited to the stage? Give reasons for your answer.
8. As an ethical study, what is your estimate of the Tempest?

SCIENCE OF EDUCATION.—1. In teaching geography how would the principle of apperception be called into use?

2. Show how you would employ the principle of apperception in teaching history.
 3. Under what circumstances may a new idea entering the mind cause an important readjustment of the existing body of ideas?
 4. What is meant by the threshold of consciousness?
 5. On what conditions does the permanency of knowledge depend?
 6. When we say that there is an order of logical dependence among the topics that constitute a subject, what do we mean?
 7. What results from a violation of this order in teaching the subject?
 8. If one were studying physiology, what would be the advantages of having an actual human skeleton over the representation of one in the book?
- (Any five.)

HISTORY.—1. "*The change, the movement, the progress which occurs in the life of a people is that peoples's history.*"—Kemp.

Discuss the above.

2. In the primary grades can the children be led gradually to *see* and *feel* the history which they study? Illustrate.
 3. What is meant by "the *unity* idea" and the "*epoch* idea" in history? Illustrate.
 4. Discuss "the relation of geography to the movement in history."
 5. Show how primary history work may form a basis for language work.
 6. Discuss the value of history in the development of moral character.
- (Any five.)

ANSWERS TO PRECEDING QUESTIONS.

READING.—1. The *how* will be accomplished through the ideas of substitution and of similarity of sound and form.

2. It is natural to express our thoughts to each other in a correct manner. The child, before he is spoiled, is a perfect elocutionist. Let him be kept free from mannerism, monotony, and affectation, and when he understands the thought in the symbols, his expression of it will be easy, because natural.

3. The first work of a selection should not be the oral expression of it. Let there be, first, a thorough sifting of it for the ideas, through a process of search questions, all converging to the main thought, until the selection is mastered as to its content; then follow this work with an exercise consisting of the oral expression of it.

4. The construction of a picture in reading is giving concreteness and movement to the objects that represent the elements of the thoughts and ideas set forth in the symbols. A vivid picture of the scenes is thus kept before the mind continually, thereby giving the theme such a realistic cast that the attention is eager and constant. If the child is not led to do this, his reading (?) is simply *words, words, words*.

5. It should appeal to child life; it should be pure and point toward the right kind of a life; it should be easily interpreted.

6. The complete selections, for then the interpretation can have unity in it, and the purpose of the author can be satisfactorily determined.

ALCOHOL AND NARCOTICS.—1. The lighter wines do not so readily cause inflammation. Their very mildness causes a great amount to be used, which, in the course of time, in its general debasement of the tissues, affects the synovial membrane and the surrounding fibrous parts accessory to the joints. If alcoholic drinks are strong enough, the digestive organs, especially the stomach and the intestines, suffer first, as their tissues are very sensitive.

2. Coagulation is the general tendency in both earlier and later stages, but in the later stages the drinker has been forced, in seeking relief, to drinking large amounts of water; this causes a thinning of the blood, which counteracts coagulation. Also, through the effects of a continued use of intoxicating drinks, the constituents of the blood have become so changed and devitalized that the conditions for coagulation are absent.

3. All investigation proves that alcohol affects the nervous system directly, and those parts which are the most delicate suffer the most. When reason is dethroned, anarchy reigns. When the controlling ideas that curb the passions, are no more, then the passions run riot.

4. If true, it is because the inroads made on the organism by tobacco are slow but very marked and positive. For the effects of tobacco to be more certainly hereditary than those of alcohol, such effects would have to be more injurious to the nervous system, as its disorders are more frequently transmitted than any other kind. Late investigations have pointed to the idea that tobacco is more injurious to the nervous system than alcohol.

5. Opium, taken in moderate doses at first, increases the speed of the circulation. This soon subsides and an irregular pulse sets in. Its effect

upon the circulatory system is such as to weaken the nervous control of the caliber of the vessels so as to cause them, in time, to exhibit permanent dilatation.

ARITHMETIC.—1. The subject of United States money, as a subject, should be introduced in an elementary way in the third school year. Before this time, it is presumable that the child has had concrete problems involving *cents*. To make the application of the fundamental rules, let various concrete problems be given, requiring in their solution an application of those rules.

2. By the introduction of bills the teacher brings into the work several valuable and important features, such as practice in the use of the *decimal point*, relative prices of various articles, and business forms, language, and customs. The following may serve as an example :

Indianapolis, Ind., October 10, 1896.

Mr. John Smith,
Independence, Kansas,
Bought of George Jones & Co.:

100 lbs. A Sugar @ $5\frac{1}{4}$ c.....	.....	.....
150 lbs. Java Coffee @ 27c .....	.....	.....
25 lbs. Oolong Tea @ 60c.....	.....	.....
30 gals. Syrup @ 45c .....	.....	.....
20 doz. cans Tomatoes @ \$1.10.....	.....	.....
55 bu. Potatoes @ \$0.40 .....	.....	.....

3. He can be led to comprehend clearly these definitions by leading him to construct the figures for himself, and by leading him carefully and gradually to note the distinctive features of each.

4. Concrete problems illustrate common, every-day life, and thereby come in touch with the pupil's experience; and whether in arithmetic or in anything else, we are always interested in that which illustrates our own life or experience.

5. Answer, \$896.95+.

6. Answer, 77.3 inches.

7. From May 6 to October 11=158 d.; from September 25 to October 11=16 days. Amount of \$243.16 for 158 days, at 8%, = \$251.697. Amount of \$178.64 for 16 days, at 8 %, = \$179.275. \$251.697 + \$179.275 = \$430.972, answer.

8. The face of the note is \$1486.90, the cash price.

9. In perimeter they are as 1 to 2; in area, as 1 to 4.

SCIENCE OF EDUCATION.—1. By basing the conception of objects that can not be seen upon similar objects within the experience of every-day life, as the conception of a mountain may be built upon that of a hill; of a lake upon that of a pond; of a river upon that of a small stream, and miniature islands, capes, peninsulas, isthmuses, etc., may be found in the small branch

or stream that all are familiar with. All the "ideas that the child has already picked up about hills, streams, roads, travel, storms, trees, animals, and people, should be utilized.

2. By leading the pupils to see and appreciate the fact that the people whose story they are studying were people like unto ourselves, possessing similar hopes, fears, and aspirations; struggling with the world's difficulties, and meeting with much the same defeats and victories—in fine, that with them, with us, with every people, life is a conflict in which man struggles to free himself from his limitations, and the story of that conflict is history. We are living ours now, and our actions, customs, homes, institutions, form a basis for the proper understanding of, and an intense interest in, those of another people.

3. If one's previous ideas upon a subject have been weak and undecided, "a new theory which strikes the mind with great clearness and vigor is able to make a powerful assault upon previous opinions and perhaps modify and overturn them." (See McMurry, page 182.)

4. It is in the *realm* in which an idea is held just before it is introduced into consciousness. It is where an idea is when it knocks at the door of the understanding. The old ideas may not be in consciousness at the time, but the new idea asking admission will soon cause them to rally to partake in the process of apperception.

5. *Chiefly* on the degree of intensity in the attraction between the individual self and the universal self. There are other conditions:—

- (a) The frequency with which it is called into consciousness.
- (b) The degree of thoroughness attendant in the process of assimilation.
- (c) The extent of its correlation with other knowledge.

6. It means that there is a fundamental idea, or principle, or process embodied in the first topic, upon which the existence and clear understanding of the second topic depends; the third topic will depend upon the second, or upon both the first and the second—as the natural outgrowth of them; and so on.

7. Confusion of ideas; lack of clear understanding, and of a proper knowledge of the subject; the *whys* of some of the steps will be lacking.

8. The same advantage that concreteness always has over abstractness. The relative position of the parts, their characteristic qualities, their real size and forms, their appearances from different points of view, can, from the skeleton itself, be thoroughly understood, and make a firm and deep impression upon the mind. A picture reveals something, but it lacks in size and it presents the subject from only one point of view.

GRAMMAR.—1. "Where they first trod" is an adjective clause modifying the word "soil;" "what there they found;—freedom to worship God" is a clause used as the direct object of "left." [Some authorities here change "what" to *that which*, and parse *that* as the direct object and *which there they found*, etc. as an adjective clause modifying *that*.]

2. Of the first principal clause, the word "you" understood; of the second "They."

3. The word "unstained" is used as an adjective, modifying "what" or *that* (see answer to 1); "unstained" is used as a predicate adjective, or complement, and the verb "left" being transitive "unstained," in its modification, relates to the object. "There," an adverb of place, modifies "found."

4. "Soil" is in the objective case, by apposition with "it;" "freedom" is in the objective case, by apposition with "what" or *that*. (See answer to 1).

5. "To worship" is used as an adjective modifying "freedom."

6. Tense is that property of the verb which expresses the relation of time. The thought implied by the name of each tense is that it truly indicates a certain specific time.

7. (a). To-morrow is Wednesday. (b). He might be there by noon. In (a) the verb is *present* but the idea is future; in (b) the verb is *past* tense but the *idea* is future.

8. See any good grammar.

9. See any good work on the subject.

10. By special drills and exercises, both oral and written, upon the correct forms of their difficulties; by calling attention to their errors at the time, and asking for the correct expression; by so directing conversation exercises as to cause the pupils to use expressions involving their difficulties.

HISTORY.—1. A nation can not become stationary any more than can a man; if either attempts it, the movement will be backward. Advancement in civilization is movement rather to a higher realization of ideal manhood, to a more nearly perfect condition of institutions. The history of the progress of civilization, of the progress of man and society, is the only real history; all other forms of history center in this, are auxiliary to it; it is a great central idea embodying all the rest, and the only one that moves along through the centuries undimmed and unforgotten.

2. The children in the primary grade do not *study* history, but they can be led to see and feel the history that is given to them, if is given to them in a proper manner. In biography and in story are many valuable historic ideas so connected with human life and struggles that the children become intensely interested in the lesson and manifest their feeling by expressions of approval or disapproval, of anxiety or delight. In the books of the Young People's Reading Circle are many illustrations of historic deeds. In "Stories of Great Americans for little Americans," the children learn much about Wm. Penn, Benjamin Franklin, Daniel Webster, etc., in a way that causes them to desire to be like these great men in their useful and manly lives.

By the *unity* idea is meant that the history of civilization has from the beginning been a continuous stream running through the centuries, growing broader and deeper as epochs passed away, and to which all other historic details have been simply tributary. (See answer to 1.)

The *epoch* idea is the idea that in the advancement of a people, they pass through certain distinct stages of growth or progress, each of which is a

period so marked by its own peculiarities, details, and struggles as to be distinct from other periods. Authors differ in their opinions as to what constitutes an epoch. Some divide our history into the epoch of discovery and exploration, the epoch of settlement, the epoch of colonization, etc. Others apply the term epoch to a longer period, using a different idea for a basis.

4. Geography has to do with man's physical environment ; and this has a very great effect on his life and progress. If its features are *arctic* in their nature, man is kept from mental growth by his struggle with the rigid climate and he has no history. If his environment is *equatorial* he is apt to be sluggish, especially if his physical wants are supplied by the bountifulness of nature ; he is void of energy and his advancement is meager. If his climate is *temperate*, he feels an inspiration to battle with his environment and build up his institutions—he lives a history noble and inspiring.

5. By having conversation lessons on the subject matter, in which lessons the teacher should take special pains in directing the pupils in the use of good language. Also, by having pupils to write out points or incidents they remember, and using their written productions as material for language lessons.

6. Because history deals with the progress of man in his struggles to better his condition, there is no other subject of study, in the school course, so full of incidents and examples illustrating the great value of integrity of character and moral uprightness. The pupil should be led to see that in the end right has always been victorious, and that the world esteems morality higher than knowledge.

PHYSIOLOGY.—3. The tympanum is an air cavity, so arranged as to permit an equal pressure of air on both sides of the *membrana tympani*. This cavity also permits the chain of bones to transmit the vibration across to the internal ear.

4. The functions of the cornea are (*a*) to protect the more delicate part of the eye behind it; (*b*) to receive and refract the rays of light.

5. The organs of touch are (*a*) the *touch corpuscles*, oval-shaped bodies occurring in the more highly sensitive parts, such as the palms of the hands, the soles of the feet, and the lips ; (*b*) the *end-bulbs*, generally, oval or spheroidal, smaller than the touch corpuscles, and occurring in the lips, tongue, palate, etc.; (*c*) the *net-work of the minute divisions of the sensory nerves*, which lie imbedded in the dermis, in all the outer parts of the body, except in the hair, the nails, and the teeth.

6. A reflex centre is a collection of nerve cells, which upon receiving an impression carried to it on a sensory nerve reflects a related impression along a motor nerve to that part whence originated the irritation.

7. The germ theory of disease is that contagious and other diseases are caused by bacteria, or microbes, growing and multiplying in the body, and thereby introducing into the tissues a kind of poison.

8. Some say under no circumstances can it be administered in safety. Others say that in small doses, at the crisis of a disease, it aids the weakened constitution to rally until the critical period has passed. There is a very wide divergence of opinion on this point.

GEOGRAPHY.—1. So as to make prominent the natural, existing correlation between the life of man and his physical environment.

2. By its causing the disintegration of rocks and a loosening of the soil.

3. The tide of migration was turned that way in the days of slavery. It was kept that way by superior facilities for transportation, by the fertile soil, rich mines and favorable climate, and by the quickness with which prairie regions could be made to yield a return for labor.

4. Not so much as one might think. Navigation from the Great Lakes through the St. Lawrence is not very extensive, and has had but little influence upon the growth of Canada. By the mouth of this river being also an *inlet* over which Canada has exclusive control, it has promoted the growth of that part of the Dominion and has given the Canadians a feeling of security and advantage in cases of war. Canada is much the richer by being the possessor of that portion of country, on account of the great extent of its productions.

5. A large city by no means implies a large river. London, New York and Liverpool are large because they are seaports, and because they are near abundant natural resources, and in easy communication with the interior.

6. Yes. England says that Turkey is too big for her to "tackle" alone, and wishes Uncle Sam to help. In an attempt to conquer Turkey, an army would be met with several serious obstacles, such as a large amount of desert country, much uncultivated territory, poor roads, rough and partly mountainous regions, etc. [The geographical features referred to above would be in the way of a military campaign against Turkey, and would cause it to make very slow progress; this would give the Turk time to take revenge by wholesale murder: and his nature is such as to cause him to do so. By a let-alone policy then, fewer murders might be committed.]

7. Iron, coal and petroleum have contributed largely to the prosperity of Pennsylvania, through their money value, and through the industries they have promoted, thereby affording work to a large number of men.

8. The different characteristics of the inhabitants of the two countries are accounted for by different ancestry, climate and soil.

THE TEMPEST.—1. I do not know of a sublimer passage in Shakespeare. The sublime in literature is always some suggestion of great power or force that produces great expansion of mind or elevation of feeling or both. The more one reads this passage and the better he grasps its thought, the sublimer it becomes.

2. The principle referred to is that one should always control his passion by his reason. The fury of Prospero's passion prompts him to destroy his enemies; but his reason tells him that he must seek only the good of those that have wronged him, that their highest good is penitence, and that forgiveness is nobler than revenge:—

"Though with their high wrongs, I am stung to the quick,
Yet with my nobler reason 'gainst my fury
Do I take part: the rarer action is
In virtue than in vengeance: they being penitent,
The sole drift of my purpose doth extend
Not a frown further."

3. I have already answered, on the ground that they are penitent.

4. Caliban has come to see that higher or spiritual life, such as Prospero lives and has tried to induce Caliban to live, is superior to animal life, such as Caliban himself, Trinculo and Stephano have been living.

5. Its rhetorical excellence lies in the force and beauty of its expression. As a literary production, it is doubtful if any play could be placed above it. Critics have scarcely been able to find a blemish. In its conception, its execution, its high and beautiful ideals of character and life, it is not surpassed.

6. To me, these are the most interesting elements in the story:—How Prospero came to lose his dukedom; how the lives of Prospero and Miranda were saved; their life on the island; Prospero's power over spirits; the storm that landed his enemies upon his island and placed them completely under his control; the love affair of Miranda and Ferdinand; and how Prospero became again the duke of Milan and his daughter, the queen of Naples.

7. No; there is too little action and too much thought in it. The *Tempest* is transcendental and can not be acted; it must be thought. It is pre-eminently a play to be read and studied.

8. This is its greatest element. Its ethical ideals do not appear on the surface but study discloses them; and when we do perceive these ideals, we are impressed that they are absolutely correct and that we ought to make them our own and live by them.

JONATHAN RIGDON.

TOWNSHIP INSTITUTE OUTLINES.

GUIZOT'S HISTORY OF THE CIVILIZATION OF EUROPE.

TEST-WORK :—NOTES, TOPICS, AND QUESTIONS,
FOR USE AT TOWNSHIP INSTITUTES.

THE FEUDAL SYSTEM.

LECTURE IV.

(The figures refer to pages in the book itself.)

I. The two-fold question put to every event, system, or condition of society (95); show the alliance here between history and moral philosophy. The bringing together of theory and practice (96). The two influences molding society up to the present time. A better state of things; the mind improved (96, 97); social systems improved (97). Theories vs. facts; the royalty of truth; a great characteristic of the civilization of France (97, 98).

II. *Feudalism*:—A proof of its necessity; how it appeared to men of the time; its universality and far-reaching influence (98, 99). Some institutions feudal only in form (99); their constant effort. A hint as to the proper investigation of feudalism (100).

III. The relation of physical life to the course of civilization (100). The effect of the feudal system upon the distribution of population (101); the influence of this change of distribution upon civilization.

IV. The beginning of a fief—the first form of feudal society (101, 102); the type of the feudal system (102 and N); the unit (N, 102); the fief r

essor an important personage (102, 103); his position compared to that of the Roman patrician (102, 103); the effect of his position upon himself (103, 104).

V. *Family systems*:—The patriarchal system (104); the clan; these two systems compared to the feudal family. Account for (a) the marked development of domestic manners in the feudal family (105, 106); (b) and for the improvement in the condition of woman (106).

VI. Why the principle of inheritance was strong in the feudal system (106, 107); the feelings that arose among the serfs (107); the relations the serfs bore to their fief (107, 108); Attitude of the country people toward the feudal system, and why (108). How feudal despotism differed from other despotisms (108); the kind of tyranny to which man will not submit (108). The nature and extent of the priest's influence,

VII. Show that the people (serfs) did not form a nation (110); describe the attitude of the fiefs toward one another (110, 111). The obligations existing between baron and serf (110, N); the penalty of failure (110, N). An attempt to legalize these obligations (111).

VIII. A political guarantee (111); two systems (111, 112). Show that under the feudal system neither of these could exist (112, 113), the nature of a parliament of possessors of fiefs (113, 114); the rights of a member; the use of force. Nature and characteristics of the federative system of government (114, 115); an element necessary to its success (115); why the feudal confederation failed (115).

IV. *Feudalism*:—Its effect upon the individual (116, 117); upon society (116, 118); in what the progress of society consists (116). Discuss the notion of the right of personal resistance as herein set forth (116, 117).

X. Chivalry and feudalism (117 and N). Intellectual outgrowths of feudal times (118). The development of chivalry (117, N); its good and bad features (118, N), German peoples and centralized government (N, 118).

XI. The powers opposing feudalism (119); attempts to regulate it; an erroneous view of it; looked at on two sides (119, 120). Feudalism true to the prevailing principle of human society (120).

XII. *The Feudal System*:—Its limits as to time and territory (121); a marked peculiarity; its three fundamental ideas; a reason for its establishment; two incompatible principles. The origin of the fief.

The *precarium*; its nature (121, 122). The relation between lord and vassals (122); the feudal tenure developing (122). Origin of the forms of feudalism; of the spirit. Its aim; its chief merit; its decay; causes of its downfall.

SUPPLEMENTARY.

For some time the differences and distinctions in nationalities had been sufficient to develop a tendency towards separation. By the treaty of Verdun, August, 843, that magnificent empire which had been the life-work of Charlemagne was broken up into three monarchies.

To Charles the Bald was assigned the western portion which in time became the kingdom of France. He was at once confronted with rebellions, several provinces defied his authority, and his reign of 37 years was one

of turmoil and struggle. We quote the following as bearing upon the subject:

"The principle of feudalism made rapid progress during this distracted reign. Royalty, enfeebled and decaying, was manifestly incapable of enforcing its authority or protecting the public interests; the nobles were thus compelled in self-defence to assume sovereign power; and each baronial domain became by degrees a separate independent kingdom. The face of the country was soon covered with fortresses and walled towns, for the preservation of life and property from the ravages of the Norman bandits. Charles the Bald attempted in vain to check this movement on the part of the aristocracy, which tended directly to sap and overthrow the monarchy. He repeatedly forbade the erection of castles and the fortification of towns without the royal permission; but in the existing state of society the measure was of absolute necessity; the kings edicts were disregarded and in the end he was compelled to yield.

The freemen and small proprietors, finding that the central government was utterly unable to protect them, were naturally led to apply for succor to some powerful neighboring baron, to whom they recommended themselves, as the phrase went by the promise of a yearly payment in money, or by undertaking personal military service as his vassals. This practice was formally sanctioned by a royal ordinance of 841, and a capitulary published some years later rendered it obligatory. The step, though suicidal on the part of the crown, was inevitable from the exigencies of the times. The allegiance which had hitherto been paid to the sovereign was thus transferred to the provincial counts and other feudal dignitaries; and, as a necessary consequence, both lords and vassals became alienated from the throne and its interests; and the territorial and administrative unity of the empire, so laboriously built up by Charlemagne, was ere long dissolved. Gradually the allodial lands were converted into feudal tenures, the freeholder gladly submitting to this sacrifice in return for the guarantee of protection and security. And, to complete the revolution every possessor of a fief usurped within his own boundaries all the functions and prerogatives of sovereignty; he declared war and made peace, dispensed justice, imposed taxes, coined money, enacted laws, and conferred honors and rewards. —*Student's History of France.*

The Germans to the east of the Rhine, occupying a country in which the Romans had never permanently established themselves, and in which there were no foreign elements to mingle with and change their own native civilization, formed a homogeneous society out of which a genuine national government should have developed. At the beginning of the tenth century they chose for themselves a national king in Henry the Fowler, Duke of Saxons, a descendent of the Saxon hero, Widukind, who had been the soul of the national cause against Charlemagne. He and his son Otto, the last during the earlier part of his reign at least, ruled wisely as national kings, and everything seemed to promise the speedy growth of a compact and orderly German nation. They had a national cause against the savage Hungarians, who were continually making plundering inroads into t'

kingdom; cities were built, the people were encouraged to adopt a town life, and commerce was increased; a check on the power of the great dukes that is, a check on the tendency to split the commonwealth into little, independent fragments—was provided in the palatine counts; the frontier was defended or enlarged, and turbulent vassals were subdued. But alas! the phantom of the dead empire from the banks of the Tiber beckoned Otto and he went to Rome to be crowned. The same spell fastened itself upon his successors, and in their frequent and long absences in Italy, and, from the greater interest which they took in the lofty pretensions of the Roman empire than in the less magnificent realities of the German kingdom, the opportunity was given the great vassals to establish their local tyrannies on a firm basis, and to obtain, finally, a virtual independence. The feudal system was carried to its logical conclusion, the country was broken into innumerable fragments, and all hope of a united German nation passed away till after long and terrible centuries.—*G. B. Adams.*

The origin of feudalism is as difficult to trace as the source of the Niger. The relation of chief and clansman among barbarians, the oath of Roman soldiers to the emperors, the civic responsibility of a father for his children transferred to the lord for his dependents, are all elements in the system which overspread Europe in the middle ages. Men in those times commonly regarded it from the practical point of view as service for reward. But it came to have a higher meaning to the state. The feudal baron was the representative of kingship on his domain,—rendering justice, maintaining police, and seeing that military service was performed. As a viceroy he was accountable for the just performance of these duties to the crown; above all, he was a link in the great chain that bound the lowest peasant and the successors of Charlemagne.—*Pearson.*

As to the cause of the spirit rather than the forms, the spirit which gave the feudal system its hold upon society, they are to be found in the confusion of the times, the disruption of society, the difficulty of communication, the absence of general ideas, the narrowing of sight and interest. The strong man, the baron of the neighborhood, could give some degree of protection and security. The central authority, which nominally governed the state, could give none. Therefore, whatever, near the strong man's castle, needed security, submitted itself to him for his protection. His subjects looked to him for government, rather than to the central authority, and for the protection of his dependents and the defence of his own rights he trusted mainly to his sword. In this way little local dominions were built up everywhere. In reality, feudalism may be said to have been the triumph of the individual over society, of the local over the general.—*G. B. Adams.*

PEDAGOG.

GRAMMAR.

- I. The Thought.
 1. How formed.
 2. Elements of.
 - a. Subject.
 - b. Predicate.
 - c. Copula.

3. Definition of the thought.
 - a. Definition of the elements of the thought.
4. The relation of the thought to the sentence.

II. The Sentence.

1. Its purpose.
2. Its elements.
 - a. Essential.
 - 1¹. Subject.
 - 2¹. Predicate.
 - 3¹. Copula.
 - a. Two good definitions for each.
 - b. Modifying elements.
 - 1¹. Purpose of.
 - 2¹. Definition of.

III. The relation of the thought and the sentence to the subject-matter, purpose, and steps in grammar.

IV. Educational value of "I" and "II" above.

V. Educational principles with which "I" and "II" are in harmony.

The only circumstances under which one would naturally say, "The tree is green" are, that the general idea tree, plus what the "the" adds, and the general idea green are old ideas. These ideas were acted by the mind at some previous time and were held by it as tendencies. When the stimulus was supplied, the idea tree was reacted with its attributes fused into an undifferentiated whole. The mind then isolated the attribute greenness, and then asserted unity between it and the object tree. This triple act of the mind, that is (1), grasping an object as an undifferentiated whole (2), isolating some attribute (3), asserting the relation between that attribute and the object, is the mind's method of forming a thought. (The term, thought, here means the same thing as is meant by a judgment in logic.

From the above it is seen that three elements enter into every thought, the idea of the object about which the mind thinks, the idea of the isolated attribute, and the relation between these. Thus the subject of the thought is the idea of the object about which the mind thinks; the predicate of the thought is the idea of the isolated asserted element, and the copula of thought is the relation between these two ideas.

The thought itself may be defined as a mental product resulting from the triple act of mind in asserting the relation existing between two ideas.

The difference between a thought and a complex idea may be seen from the following: We may say A green tree, A beautiful flower, each the expression of a complex idea, and we have nothing that can be defended or opposed; but if we say The tree is green, The flower is beautiful, each the expression of a thought, we have something that will admit of defense or opposition. Just in this difference lies the life of thought.

The relation of the thought to the sentence is the relation of the thing symbolized to the symbol; *i. e.*, the sentence is the symbol of the thought.

The sentence is then that language form whose purpose is to express a judgment.

The analysis of the mind's activity in forming a thought shows that the thought has three elements. The sentence is the symbol of the thought and the thought imposes its form upon the sentence. The sentence thus has three essential elements—the subject, the predicate, and the copula. (This point is disputed by many who never seem to grasp the idea that the triple form of the thought is imposed upon the sentence.) The following, from C. C. Everett's "Science of Thought," is directly on this point: "A proposition consists of three parts, namely, that of which something is affirmed; this is called the subject: that which is affirmed of the subject; this is called the predicate; and the connecting or affirming particle which is called the copula, which is sometimes, however, not distinctly expressed, the affirmation being included in the predicate." The thought here is that every sentence has three essential elements, but that in such sentences as *Plants grow*, "grow" expresses the attribute that was isolated in the triple activity, but, also, expresses the assertion between this and the object of which the subject of thought is the idea.

From the nature of the sentence, then, it is seen that the subject of the sentence is that part of it that expresses the subject of thought, or the subject is that part of the sentence that expresses the idea of the object of which something is asserted; and that the predicate of the sentence is that part of the sentence which expresses the predicate of thought, or the predicate is that part of the sentence which expresses the idea which is asserted of the object expressed by the subject; also, that the copula of the sentence is that part of the sentence which expresses the copula of thought, or the copula of a sentence is that part of the sentence which unites the subject and predicate and asserts.

The sentence also has parts that are called modifying elements, or modifiers. The mind uses a modifier to make a simpler idea more complex. Thus in the sentence, *Flowers are gone*, the idea *flowers* is simpler in content than it is when the modifier *spring* is joined to it, making the idea the complex one, *spring flowers*. Of the terms, *spring* and *flowers*, one, *spring*, is subordinate to the other, *flowers*, and this is always true of a term that is joined to some other term to make it express a complex idea. Then, a modifier seems to be a subordinate part of the sentence joined to some other part of the sentence to change its meaning in some way.

It has already been stated that the relation of the sentence to the thought is that of symbol to the thing symbolized. It was also shown in previous work that the sentence, with its various relations and meanings, is the subject-matter of grammar; so, the relation of "I" and "II" in the outline to the subject-matter of grammar is that of part to the whole. And the relation of "I" and "II" to the purpose of grammar is that of means to an end. Seeing the thought, and the sentence as its expression is the first logical step of the grammar work.

"I" and "II" in the outline have all the educational value that comes from the careful, logical thinking of the first fundamental ideas of any subject.

It is hoped that what has been said will show that all grammar work may be developed from the thought underlying it, and that all form in language

is determined by that thought; "and that there is hardly anything more interesting than to see how the laws of grammar, which seem at first sight so hard and arbitrary, are simply the laws of the expression of logical relations in concrete forms."

GEO. W. NEET.

GEOGRAPHY.

I. Method in geography is the mental process by which the mind of the student masters the subject-matter of geography.

II. Subject-matter.

1. The phenomena of the earth as affecting man's institutional life, and in turn affected by man's institutional life.

III. Purpose.

1. To furnish the child food for thought, the mastery of which will equip him with knowledge necessary to a successful life, as well as awaken and exercise his mental faculties. (Expand and illustrate the purpose of geography.)

IV. Steps. In general, lines of work that are mainly in—

1. The sense—perception stage.
2. The stage of imagination.
3. The stage of conception.
4. The stage of reasoning.

V. A brief outline of the work for first, second, and third years.

1. *First Year.*

a. Lesson on: Place, form, size, distance, direction, and color.

2. *Second Year.*

a. Animals may be studied in their geographical relations:

1. That live on land.
2. That live in water.
3. That live in the air.

4. That live in the hot parts of the earth; in the cold parts; on mountains; in forests; on plains, etc.

b. Planets—Treated the same as animals.

c. People—Treated with respect to how they live, and what they do; what they eat, wear, etc.; the distance and direction from the child's home.

3. *Third Year.*

a. Mastery of the general idea of the geographical elements, as hill, lake, mountain, river, etc.

Note:—This work must be done inductively by making:

1. Actual journeys to a type of the thing studied.
2. Imaginary journeys to typical regions.
3. Mouldings of the things studied in sand.

After studying the individuals thus, the child is to be led to form the concept. What other geographical value would this kind of work have?

The statement that method in geography is the mental process by which the mind of the learner identifies itself with the subject-matter of geography may mean much or little to the reader; for, we are met at the out-set by what shall be included in the subject-matter. It is evident that many of

the facts of physics, chemistry, botany, zoology, astronomy, geology, economics, politics, history, etc., must be dealt with in geography. It is also equally evident that in this subject one can not cover the whole field of knowledge that properly classifies itself under the heads of those sciences. Then how much of these facts shall we include in geography, and how shall we draw the line?

Until this is settled in the mind of the teacher, his work will be more or less vague and unorganized.

Method in any subject is the process of the mind in identifying itself with the thought in that subject with the creative activity of that subject.

It is evident, then, that in order to see what the mind must identify itself with in the study of geography, one must have the concept geography, also an idea of what makes any fact a geographical fact. There is a class of facts that are called geography, but geographers do not agree with respect to what these facts are. Some say geography is a science, but others deny this. I heard a prominent educator of Indiana say not long ago that "geography was no science, but a kind of hash of sciences."

The thought of the author of the outline is, however, that *the facts of the earth viewed in relation to man's institutional life, i. e., as affecting man's institutional life and in turn affected by man's institutional life, is the subject matter of geography*. Then, any fact of the earth viewed in its relation to the institutional life of man is a fact of geography.

An analysis of the subject-matter reveals four elements, viz., *the facts of the earth; man's institutional life; the effect of the facts of the earth on man's institutional life; the effect of man's institutional life on the facts of the earth*. All these elements are to be found in any geographical fact. For instance, the region surrounding Denver, Colorado, is a fact of the earth; the schools, the churches, the industrial life, city government, etc., are the institutional life; the climatic conditions, the physical features of the country, the minerals, etc., determine, to a large extent, the institutions; and this is the effect of the facts of the earth on the institutions; the institutions have reacted on the earth, and have built the "big ditch" and other ditches for irrigation purposes, and this is the effect of man's institutions on the facts of the earth.

A further analysis of our subject-matter shows that there is in it the guiding principle of geography work, and that this guiding principle is selective, interpreting, and emphasizing; *i. e.*, it selects the facts to be taught; it shows in what relation they are to be taught, and it distinguishes between the important and the unimportant. The guiding principle is that in the subject-matter the facts are to be viewed in their relation to man's institutions. Thus, "as affecting man's institutional life" (1) those phenomena of the earth that have had much to do with institutional growth would be chosen; (2) that a fact, while it may be one of *geology*, becomes one of geography when viewed as to its effect on man's institutions or as to the effect of the institutions upon it; (3) that, since some are remotely related to institutional life and some more closely related, those closely related are the important and those remotely related are the unimportant.

So far, only the thought embodied in the subject-matter of geography has been discussed, but the activity of the mind in identifying itself with the subject-matter is of equal importance.

The discussion of this brings us to the purpose and steps.

The purpose—the removal of the child's limitations along certain lines—placed geography in the common school curriculum and determines the nature of the work. The idea in the outline is that, while mental discipline must be kept in view, the knowledge gained in geography in this process of disciplining is such that it will assist the pupil in his pursuit of a happy and successful life, and that he could not well do without this knowledge.

An analysis of this purpose will show that it is *intellectual*, *emotional*, and *volitional*. The knowledge spoken of above is intellectual; also, by gaining this knowledge, general intellectual tendencies would be awakened and exercised.

The emotional purpose would find its fulfillment in the awakening of a permanent, enduring interest in geography; also, in the love for the facts of the earth, that would come from the child's seeing himself mirrored in nature.

The volitional purpose, as hinted above, would find its fulfillment when the child has put himself in harmony with the laws and forces of nature so that they may assist in his freedom instead of opposing him.

Educationally considered, since the characteristic activity of the child's mind in the first work in geography is sense-perception, the first step is a line of work adapted to this kind of knowing. Similarly, there is a line adapted to the stage of imagination, one to the stage of conception, and one to the stage of reasoning.

From the analysis of the subject matter it appears that logically the steps are:

1. The mind's activity in thinking the phenomena of the earth.
2. The mind's activity in thinking the institutional life of mankind.
3. The mind's activity in thinking the relation between these two.

The outline for *first*, *second*, and *third* year's work is merely suggestive. It is not the thought that the teacher should follow just this outline, or should attempt to do all that the work indicates. The assumption is that the child at the beginning of the fourth year is ready to take up the systematic study of geography, and the work before this time should be devoted to preparing him for this systematic study.

An understanding of what primary geography is to do for the child will enable the teacher to determine the nature of the work to a large extent.

The following seems to me to state this well: "The child should get two things from his first three years of school life in this particular branch. In the first place he should acquire some definite notion of his own home life and surroundings. In the second place he should have some good general notions of the greatness of the world and its people, of the variety of climate and the productions of the earth. This should also include a general idea—a very vague one of course—of the great size of the earth, of the continents and the oceans."

It is thought that lines of work as indicated in the outline for the first three years will give the child just this preparation.

The *first* work must be a kind of nature work. The child must study home geography and to a large extent in the first two years.

In the third year's work two purposes are to be held in view, viz., (1) to give the child concepts of the geographical elements; (2) to give a notion "of the greatness of the world and its people, of the variety of climate and the productions of the earth" and a vague knowledge of the earth as a whole.

In the light of the principle that the mind grasps objects as vague wholes, then analyzes, then synthesizes, it would seem that the first work in geography should aim at giving the child a vague idea of the earth as a whole. But it seems to me that this can not be well done in geography. The size of the earth, the child's inability to see it as a whole, and his stage of thinking all militate against it.

Basing the work on what the child already knows of geography, he must be lead from the study of the parts to the whole, then the analysis of the whole and the synthesizing and organizing.

These first three years of work well done, the child is ready to begin the systematic study of the subject.

On this phase of geography work, the article, "Purposes of Primary geography" in the October, 1896 number of the JOURNAL is helpful. Another very helpful treatise is "Special Methods in Geography" by Chas. A. McMurray.

GEO. W. NERT.

LITERARY INTERPRETATIONS.

I.

In reading a piece of literature, it is the implicit aim of the reader to become one with the poet. This implies that he is not so in the beginning of the work of interpretation. At first, poet and reader face each other; hence the reader's order of movement must at first be the opposite of the poet's. In approaching him, the reader first passes over the ground last covered by him.

The author's order is (1) theme, (2) embodiment, (3) language; while the reader's order at first is (1) language, (2) embodiment, (3) theme. Through this order the reader descends into the heart of the poet and finds its message, the theme. And this order must always be the first work of interpretation. It brings the reader to the author and faces him about ready to watch the theme work out its perfection from the writer's side. From this point our reader and poet are one in the order of movement, and the remainder of the process is the rising to the poet's plane of experience through viewing theme, embodiment and language in their organic relation.

Holding in mind, then, that in the beginning, the pupil must reach through the language to the embodiment, and that in it, he must see the theme mirrored forth, we have the pupil's method of approach.

In the light of this necessity, it would seem at first thought that the only logical order in teaching a literary selection is to lead off with the language, and to follow it with the image and the image with the theme. This may

in many cases be very necessary. But it is not the only logical way. Any mode of procedure is logical that accomplishes the proper end. That is the best of logic which accomplishes it in the most helpful way.

The teacher's first care in teaching a piece of discourse is to cause the pupil to grasp the theme, the life element, as soon as possible; that is, to get him in position to see it from the author's side. If then, the class is sufficiently experienced in interpretation, and the selection well suited, it would most likely give a point of advantage in interpretation to lead off with the theme, trusting the class to push through language and image without consciously putting emphasis on either. In this way, the pupil holds language and embodiment as means from the beginning. and his analysis is organic throughout.

Under other circumstances—most likely with the average class in the study of "Launfal"—the pupil cannot alone grasp the unity in the variety of pictures set forth. In that case, the teacher is compelled to make his first assignment in such a way as to bring out the different pictures and relate them in a unity that shall lead to the discovery of the central truth. And again, it may be necessary to lead off with portions of the language in order that through its meaning the pupil may form the picture. He must understand the meaning of the language sufficiently well to see the image clearly.

There are perhaps three good reasons for making the first stroke as near to the heart of the selection as possible. In the first place, the real interpretation is from within outward. Second, it brings out the pupil's power to make leaps for himself, and third, it is the method he is to use in a large amount of the reading he will do in life after school.

Prof. Tompkins asked W. W. Black to make the comments of "Literary Interpretations" for this month. Mr. Black, after studying the subject, writes: "I find the author has made the interpretation so full and so clear that I can add nothing to it. I do not think a clearer exposition can be given."

FOOD FOR THOUGHT.

[Send all communications to W. F. L. Sanders, Connersville, Ind. They should be received by Nov. 18. Be prompt. Write only on one side of your paper.]

SOLUTIONS TO PROBLEMS.

PROBLEM 145. The difference between the incomes derived from investing a certain sum in 4 per cent. stock at 112½ and in 2½ per cents at 75 is \$84. Find the sum invested.

Solution by WALTER A. VANSOYOC, Crawfordsville :

4% stock at 112½ pays 3⅝%.

2½% stock at 75 pays 3⅓%.

3⅝%—3⅓%=⅔%=\$84.

Whence 100%=\$37800, answer.

Solution by J. F. MILLIS, Bloomington :

Value (amt.) of 4% stock = $\frac{100}{112.5}$ of amt. invested.

Therefore, $\frac{100}{112.5} \times \frac{100}{112.5} = \frac{100}{112.5} = \text{income}$.

Value (amt.) of $2\frac{1}{2}\%$ stock = $\frac{100}{78}$ of amt. invested,

Therefore, $\frac{100}{78} \times \frac{100}{78} = \frac{100}{78} = \text{income}$.

$\frac{100}{112.5} - \frac{100}{78} = \frac{1}{150} = \84 ; $\frac{100}{78} = \$37800$.

PROBLEM 146. A and B run a mile in opposite directions. A's running is to B's as $6\frac{1}{2}$ to $5\frac{1}{2}$; B gets 4 seconds the start, during which time he runs $12\frac{1}{10}$ yards. Find when and where he will pass A.

Solution by JOHN MORROW, Charlestown :

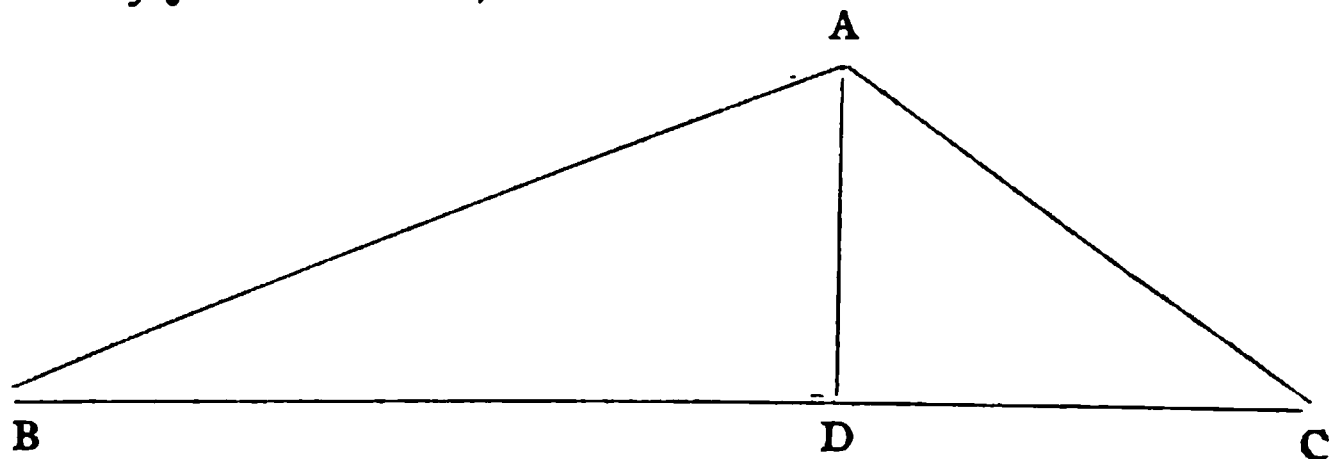
$12\frac{1}{10} + 4 = 3\frac{1}{10}$, B's rate; $(3\frac{1}{10} \times 6\frac{1}{2}) + 5\frac{1}{2} = 3\frac{3}{10}$, A's rate; $3\frac{1}{10} + 3\frac{3}{10} = 6\frac{4}{10}$, sum of their rates; $1760 - 12\frac{1}{10} = 1747\frac{9}{10}$, the distance ran while both were running. $1747\frac{9}{10} \div 6\frac{4}{10} = 2264\frac{5}{8}$, number of seconds both were running; $(3\frac{1}{10} \times 2264\frac{5}{8}) + 12\frac{1}{10} = 813\frac{53}{40}$, whole number of yards B ran; $3\frac{3}{10} \times 2264\frac{5}{8} = 946\frac{1}{4}$, whole number of yards A ran.

Another solution :

A's rate : B's rate :: 13:11; $1760 - 12\frac{1}{10} = 1747\frac{9}{10}$; dividing this into two parts as 13:11, we get $946\frac{1}{4}$ and $801\frac{2}{10}$; to the latter add $12\frac{1}{10}$, and we get $813\frac{53}{40}$.

PROBLEM 147. The base of a triangle is 952 perches; the perpendicular from the angle opposite is 255 perches, and the other two sides are to each other as 25 to 39. Find the lengths of the two undetermined sides.

Solution by JOHN MORROW, Charlestown :



Given $BC = 952$; $AD = 255$; $AC : AB :: 25 : 39$; to find AC and AB . Let $X = AC$ and $Y = AB$; then $\frac{X}{Y} = \frac{25}{39}$; hence, $x^2 = \frac{625}{1521}y^2$. Let $DC = a$; then $DB = 952 - a$; $x^2 = 255^2 + a^2$; $y^2 = 255^2 + (952 - a)^2$; eliminating x and y , we get, $8a^2 + 10625a - 4537300 = 0$, whence $a = 340$. Therefore, $x = 425$, and $y = 663$.

CREDITS.

145—Walter A. Vanscoyoc, Crawfordsville.

143, 145, 146—John Morrow, Charlestown.

145, 146, 147—J. F. Millis, Bloomington.

SOLUTION REQUESTED.

Page 245, example 9, Indiana Complete Arithmetic :

The 1500 francs = \$289.50; $100\frac{1}{2}\%$ of \$289.50 = \$290.947 (Paris). Accord-

ing to the example solved in the book, $\text{£}1 = \$4.87$; then $100\text{£} = \$487$; 101% of $\$487 = \491.87 (London). This in gold $= 491.87$ times $\$1.10$ in currency $= \$541.057$. $\$290.947 + \$541.057 = \$832.004$.

PROBLEMS.

150. An elliptical pond is to be surrounded by a picket fence. The diameters of the pond are 18 and 24 rds. How many pickets are required if they are 2 inches in width and if they are placed 2 inches apart?

(J. STOMMEL, Hanover Center.)

151. Find a point in a given straight line such that the difference of its distances from two given points shall be a given length.

(J. F. MILLIS, Bloomington.)

152. A lawn is half as long again as it is wide; the cost of leveling it at 18 cents a square yard is $\$846.72$. Find the cost of enclosing it with a fence at $\$1.80$ per yard.

153. A and B undertake to do each $\frac{1}{2}$ of a piece of work; A begins at 9, B at 10:30, both stop at 12, having done $\frac{1}{3}$ of the work; they resume at 1; A finishes his share at 4:45; when will B finish?

154. I invested $\$14970$ in the purchase of $3\frac{1}{2}$ per cents at 105, and $3\frac{1}{4}$ per cents at 97; my total income being $\$500$, how much did I invest in each stock?

155. Of a certain lot of goods I sell one-fourth at a profit of 5 per cent.; one-third at a profit of $7\frac{1}{2}$ per cent.; how must I sell the remainder to gain 15 per cent. on the whole?

MISCELLANY.

THE BAY VIEW READING CIRCLE.

This year, beginning November, the Bay View Reading Circle takes up special studies in American history, literature and social institutions. This organization is so good that every year its membership has nearly doubled, and in the new class 1900, now forming, two months before the opening, fifteen states were represented. It is already established in Indiana and hundreds of teachers who desire to devote a portion of their leisure to general culture are taking its course. The course is short and its plans simple but truly educational. It is a part of a thoroughly directed system, giving direction and help, and delightful comradeship in both the local and general circles. Information can be had by addressing J. M Hall, Flint, Mich.

READ Prof. D. W. Dennis's article on nature study found on another page. He will contribute a second article which will appear in December.

SHERIDAN sends out a neat Manual of its schools. This place gives employment to fourteen teachers, with M. H. Stuart as superintendent.

CENTRAL ACADEMY at Plainfield opened this year with an increase in attendance that taxes the capacity of the building. Robert L. Kelly is principal.

WEST INDIANAPOLIS floats a flag over each of the school buildings and its schools are in good condition. It employs special teachers in music and penmanship.

THE STATE BOARD OF HEALTH has recently issued some literature in regard to "School Health Rules," which should be in the hands of every teacher. Send for them.

ALEXANDRIA has issued its Manual, which sets forth in an admirable way the main features of its schools. I. V. Busby is superintendent, and what he does is always in good shape and to the point.

SEYMOUR has five school buildings and employs twenty-five teachers. H. C. Montgomery is superintendent, and has his work well in hand. Its Manual, recently issued, makes a good showing for the schools.

MONTICELLO has issued one of the "best-looking" Manuals that has yet come to our table. It is not necessary to say that its contents are just what might be expected from Supt. J. W. Hamilton. The course of study is based on the suggested State course, and is excellent.

BEDFORD—Under our new superintendent, Mr. W. C. Alexander, the schools are prospering. Three new rooms have been added to accommodate the increase of pupils. The high school enrolls eighty and seems in good condition. It is in charge of A. B. Guthrie.

FRANKFORT has issued its twenty-second annual report. It sets forth in a clear way what the schools are doing. Frankfort has adopted the new state course of study as modified by the combined wisdom of the superintendents of Lafayette, Hammond, Greencastle and Frankfort. B. F. Moore is the superintendent.

THE INDIANAPOLIS BUSINESS UNIVERSITY has just issued a new catalogue, beautifully illustrated and gotten up throughout in accordance with the highest art standard. It is a "thing of beauty." Whatever this school attempts is done in a thorough and complete manner. E. J. Heeb is the enterprising president.

THE eleventh annual meeting of the town and city superintendents will be held at Indianapolis, Nov. 12-13-14, with headquarters at the Denison hotel. An excellent program is provided. A discussion of the "Course of Study," will be a principal feature. Hon. Andrew S. Draper, of Illinois State University, is to be present and discuss "City School Systems."

UNION COUNTY.—The following brief but meaty resolution was passed unanimously by the Union county teachers' institute. "*Resolved*: That the Union county teachers' institute respectfully urges upon the legislature of Indiana, the passage of an amendment to the county institute law which will raise the appropriation from \$50 to \$100."

EDWARD GARDENER, Sec.

THE State Teachers' Association will meet at Indianapolis, December 29-31, with headquarters at the Denison Hotel. The program is about completed and will appear in full in the December JOURNAL. Some of our best thinkers and writers will read papers and take part in the discussions. "Child study" will be a leading feature this year, as "correlation" was last year. That the program will be a good one, there can be no doubt. W. A. Hester, superintendent of the Evansville schools, is chairman of the executive committee and is leaving nothing undone that will contribute to the success of the meeting.

PORTER COUNTY.—Among the resolutions adopted by the Porter County institute are found the following: We are in favor of a law requiring the examination of all candidates for the office of county superintendent, except candidates for re-election, and making ineligible those who are unable to show a proper degree of scholarship. We are in favor of the establishment by the state of one or more schools in northern Indiana for the professional training of teachers. We are opposed to the passage of any law for the pensioning of teachers by withholding a part of each teacher's salary.

THE NATIONAL NORMAL UNIVERSITY at Lebanon, Ohio, opened its forty-second year in September with unusually bright prospects. Three new members were added to its corps of instructors; the buildings have been thoroughly refitted, and the enrollment of students was larger than expected. The institution is owned by a corporation of Lebanon business men, who are putting into the management of the school the same energy and enterprise that they use to make a success in other lines. The rumor that the school was to be moved to some other point is wholly without foundation. The teachers' scientific and classic classes are large. The actual business and pen art departments opened with excellent patronage; the change in the medical year from spring and summer session to fall and winter brings in the medical students to swell the winter attendance. This university has been long before the people, and the character of its work is recognized everywhere. We are pleased to note its continued prosperity.

THE SUPERINTENDENTS' CLUB of southern Indiana met at New Albany, October 23-24. The following members were present: State Supt., D. M. Geeting; J. H. Tomlin, Shelbyville; W. D. Kerlin, Martinsville; Chas. E. Morris, Salem; R. A. Ogg, Greencastle; W. H. Hershman, New Albany; Will Featheringill, Franklin; E. H. Mark, Louisville, Ky.; P. P. Stultz, Jeffersonville and W. W. Parsons. The entire day, Friday, was consumed in visiting the schools of the city. The evening following, a general discussion of the New Albany school system disclosed the fact that the superintendents were a unit in their praise of the excellent work done in the grades and also in the high school. The spirit of the schools in every instance was of the very best character and the teaching process quite satisfactory and up to date. The high school building was found to be inadequate. The superintendents recommended most heartily the erection of a new high school building with better sanitary conditions, and the employment of three more teachers. The course of study for cities and towns was discussed quite extensively. It was the general opinion that the new course was

headed right and that it will serve as a nucleus for better work throughout the state and other states. Some of the members thought that perhaps correlation in this course was overdrawn, that for the sake of correlation the unity of the subject had in a few instances been broken; that correlation could not profitably exist except within the unity of the subject. The myth in the lower grades had its supporters and opponents. The meeting was a joyful one and beneficial to all the members in attendance. The next meeting will be held at Salem, the first week in October, 1897.

GREENCASTLE.—The writer recently spent an afternoon in the Greencastle high school building. The principal, Miss Martha Ridpath, who has had this position for many years, has but few equals as a teacher and as a disciplinarian. She teaches all the Latin and does it well. We heard a class in general history, which was well conducted, and we heard a class in literature that was superior. The school employs five teachers, and the superintendent does some teaching in addition. We were well pleased with the general atmosphere of the school. In the same building were two lower grade schools. In the one of these we found a teacher of good ability, self-possessed, quiet and of ladylike bearing. The order was not quite ideal, but doubtless will be soon. It is still early in the year. In the other room we looked in vain for something to criticise, either in regard to order or methods of instruction. The teacher certainly has unusual teaching power.

CLARK COUNTY held its institute the first week in October, which was the first change from August for many years. There were one hundred and eighty-four teachers enrolled. The instructors were F. D. Churchill and Mrs. E. E. Olcott. Every one enjoyed Superintendent Churchill's talks. No one listened to him but felt inspired to do better work and be a better teacher. Mrs. Olcott's work was mainly with the model class. Every one got a new idea to take home and use in his own school. Mr. Bell, editor of the INDIANA SCHOOL JOURNAL, was present during part of the institute and made some excellent talks. Superintendent W. B. Sinclair was present one day and made a short talk to the institute. D. M. Geeting was present one day and made a short speech. The institute was furnished with excellent music. It was decided by majority vote to hold the future institutes the last week in October. The teachers all felt that Superintendent S. E. Carr had made a wise change when he held the institute in October.

LENA HELZER, Secretary.

PERSONAL.

W. L. KIRK is principal at Otisco.

C. M. BRADY is located at Memphis.

E. S. MILLER remains at Chesterton.

ORLANDO ROSS is the best man at Utica.

THOS. SMITH is still rising at Summitville.

S. T. SCOTT is the man to see at Claysburgh.

L. D. SUMMERS directs the work at Windfall.

F. E. ANDREWS holds the reins at Sellersburg.

O. W. DABNEY is having his way at Sharpsville.

A. J. CANNON is located at Port Fulton this year.

A. R. HARDESTY is still the head man at Hobart.

JOHN A. HILL is principal of the Tipton high school.

J. W. JONES has school matters well in hand at Orestes.

GEO. BADGER trains the "young ideas" at Clarksville.

J. W. HOLTON is in charge of the schools at Henryville.

O. E. WALKER is the man that settles troubles at Ingalls.

A. E. KNOWLES is the man in charge at New Washington.

J. G. SCOTT is at the head of the public schools at Borden.

DAVID R. MAJOR is principal of the Frankfort high school.

JOE T. GILES is principal of the high school at Alexandria.

NOBLE HARTER continues in charge of the Brookville schools.

I. V. BUSBY directs the work of twenty-two teachers at Alexandria.

J. B. PEARCY continues as principal of the high school at Anderson.

E. E. OLCOTT continues to direct the educational interests at Charlestown.

A. H. BELDON is at the head of the pedagogical department at Frankton.

J. W. CARR is doing his usual good work as superintendent of the Anderson schools.

E. D. ALLEN continues in charge at Pendleton, where he has been a number of years.

C. M. MARBLE continues to give entire satisfaction as principal of the Jeffersonville high school.

W. C. GOBLE will teach this year in Fairmount academy. He reports this school in a flourishing condition.

J. H. B. LOGAN, an old Indiana teacher, is serving his fourth year as principal of the schools at Cloverport, Ky.

W. W. BLACK, a favorite among Indiana teachers will do work in the Steuben county institute to be held Nov. 9-13.

J. F. SCULL, W. H. Senour and Judge R. D. Richardson have been appointed visitors to the State normal school for this year.

F. M. MERICA, for several years past superintendent of the Garrett schools, is spending this year in study at Chicago University.

J. L. DIXON, one of Bartholomew county's leading teachers is now principal of the high school at West Indianapolis and is doing good work.

O. C. CHARLTON, at one time superintendent of the Lebanon schools, is now in charge of the history department in a Baptist college at Waco, Tex.

P. P. STULTZ, superintendent of the Jeffersonville schools, has his work well in hand and the present year's work bids fair to be the best done in the history of the schools.

MRS. LOIS G. HUFFORD, of the Indianapolis high school, has organized a child-study class. With Mrs. Hufford as leader, any class must be successful.

L. T. FARABEE, formerly superintendent of the Plainfield schools, but for the past twelve years in the pension department at Washington, came home to see friends and vote.

MRS. A. L. HAMMOND, for twelve years teacher in the Lebanon public schools, has resigned and will move to Chicago to take a special course in literature in Chicago University.

E. S. HORTON, for many years one of the leading teachers of Dubois county, has gone to Lebanon, Tenn. He has decided after eleven years' successful work as a teacher to finish his education.

D. K. ARMSTRONG, for many years superintendent of the West Indianapolis schools, is now at the head of the Knightsville schools. At the end of the school year, he is expecting to go to Chicago University.

E. E. GRIFFITH, the associate professor of English in Indiana University, did some good work in the institutes the past season. Prof. Griffith recently spent two years in Harvard doing post-graduate work in his specialty.

CHARLES W. WARD, of Vermillion county, has been appointed by the governor as trustee of the State normal school to take the place of Murray Briggs, deceased. W. H. Armstrong has been made president of the board of trustees.

DR. G. W. HOSS, formerly superintendent of public instruction of Indiana but for several years past, principal of a school of elocution and oratory in Wichita, Kansas, has recently accepted a professorship in Southwest Kansas College.

GEO. C. TYRRELL, superintendent of Ripley county, was recently in the city. He reports his schools as in excellent condition. Mr. Tyrrell is now serving his eighth year as superintendent and has done much for the schools of his county in that time.

F. L. JONES has matters well in hand at Tipton. Before a fire burned his library, he had more supplementary reading for his schools than had any other city in the state, not larger than Tipton. A part of his private library and his typewriter were also burned with the school building.

ARNOLD TOMPKINS, who is so extensively and so favorably known in this state, reports that he starts his work in the Illinois University with double the number of students in his department that he had last year. He has eight college and normal graduates in an advanced class—two of them graduates of Indiana State Normal.

CHAS. A. MCMURRY, the popular author, who is so well and so favorably known to Indiana teachers, has secured a leave of absence from the Illinois state normal and is working this year in Chicago University. He will spend a part of his time in the lecture field. He will continue to act as the secretary of the national Herbart society.

WILLIAM RAYMOND HARBISON, teacher of science and mathematics in the Lebanon high school, died at his home in Bloomington, Oct. 9, 1896. He was a rare teacher and a manly man. Charles A. Peterson, a graduate of the State University, and now teacher of natural science in North Park College, Chicago, has been elected to fill the vacancy.

JESSE LEWIS, formerly a Parke county teacher, but who for several years past, has taught history and geography in the Missouri state normal school at Warrensburg, has recently written a "Topical Analysis of U. S. History" which is published by A. Flanagan, Chicago. Mr. Lewis teaches history by the library method and this book is the student's guide. It is a good book.

COL. A. F. FLEET, the new president of Culver Military Academy, comes to the state with the best of recommendations, not only as a military man, but as a public school man. He takes an active interest in public school work. For some years past he has had charge of a military school in Missouri and he has been president of the Missouri State Teachers' association. The JOURNAL extends to Col. Fleet a cordial welcome to Indiana.

MR. AND MRS. BRADFORD A. BULLOCK have located in New York City. Mr. Bullock has accepted a position on the *American Magazine of Civics*, the official organ of the American Institute of Civics, and, by the way, one of the most interesting of economic magazines. Mrs. Bullock will continue to do literary work. They are living at the St. Dennis Hotel, Eleventh and Broadway, where they will be at home to their Hoosier friends.

JOSEPH W. LAYNE, for many years one of Indiana's leading educators, died at the home of his brother in Frankton, September 30, of paralysis of the brain. Prof. Layne was born at Frankton, in 1850. He received his early education from the common schools, and taught school at the age of seventeen. After teaching a short time, he entered Wabash College where he graduated. He then accepted a position as superintendent of the Danville, Ill., schools, which position he held for seven years. He then was superintendent of the Evansville, Ind., schools for eight years, and as such was a member of the State Board of Education. About two years ago his mind began to fail, and he grew gradually worse until the first of July, this year, when he was taken to Richmond Insane Hospital. He was removed from there on September 12, to the home of his brother. Prof. Layne leaves an estate of \$30,000, but no direct heirs, as he was never married.

Exhaustion

Horsford's Acid Phosphate

Overworked men and women, the nervous, weak and debilitated, will find in the Acid Phosphate a most agreeable, grateful and harmless stimulant, giving renewed strength and vigor to the entire system.

Dr. Edwin F. Vose, Portland Me., says: "I have used it in my own case when suffering from nervous exhaustion, with gratifying results. I have prescribed it for many of the various forms of nervous debility, and it has never failed to do good."

Descriptive pamphlet free. Rumford Chemical Works, Providence, R. I. Beware of substitutes and imitations. For sale by all Druggists. 7-tf

BOOK TABLE.

THE POLITICAL AND LEGAL HISTORY OF THE TRIAL OF JESUS BEFORE PILATE is a book of unusual interest. It has the unqualified endorsement of the most prominent people in the country. Everybody should read it. It contains over 500 pages and is well bound. It is sold by subscription. For particulars write to E. J. Heeb & Co., Indianapolis.

FROEBEL'S OCCUPATIONS.—By Kate Douglas Wiggin and Nora Archibald Smith. Boston: Houghton, Mifflin & Co. This is one in a series of books published by Houghton, Mifflin & Co. designated "The Republic of Childhood." The kindergarten gifts and occupations are taken up in chapter I, as a whole, the distinction between *gifts* and occupations being clearly made both by definition and illustration and the dominant purpose of each clearly set forth. Different chapters in order discuss the different occupations as: perforating; sewing; drawing; paper weaving; paper cutting; paper folding; clay modeling; sand work. This discussion is thorough and scientific. For example, the chapter on sewing discusses its history, its attractiveness, its relation to perforating; it gives practical directions for sewing, names materials to be used, notes the attractiveness of colors to a child and the value of sewing. The same chapter discusses the objections to sewing, the advantage of conversation during the work, the necessity of a child's remedying his own mistakes, and recommends that a child be encouraged to originality and invention. The other occupations are discussed quite as thoroughly as this. The book will be a valuable addition to the kindergarten library. Price \$1.00

LEGENDS OF THE MIDDLE AGES.—Narrated with special reference to literature and art. By H. A. Guerber, author of "Myths of Greece and Rome," "Myths of Northern Lands," etc. Cloth, 12mo, 340 pages. Illustrated. Price, \$1.50. American Book Company, New York, Cincinnati and Chicago.

Running through the literature of our own day, there are many allusions and references which cannot be understood or appreciated without a knowledge of the legends and folk-lore of this period. It is the aim of this volume to bring these within the reach of all and to describe them so they may readily be understood. Following the same plan and treatment of the author's other works on Mythology, appropriate quotations from ancient and modern writings are given in connection with the story of the different legends, to illustrate the style of the poem in which they are embodied, or to lend additional force to some point in the description. The work therefore furnishes the student with an interesting outline of some of the beautiful epics and romances that have come down to us from those far-off years, among them the Nibelungenlied with its strong characters, Titarel and The Holy Grail, The Round Table, The Story of Frithiof, The Cid, etc.

The illustrations in this, as in the other volumes of the series, are a most attractive feature. They include twenty-four full page plates in half-tone, original or selected from the best masters and drawn by artists of the highest repute. Altogether the work is a useful manual for schools, a valuable reference book for libraries, and a literary treasure for general readers.

THE WERNER GEOGRAPHIES—By Horace S. Tarbell, A. M., LL. D., Superintendent of schools, Providence, R. I.

The Werner Introductory Geography is intended for beginners in this subject. It has been arranged on the principles set forth by Mrs. Campbell in her article on primary geography in October number of the JOURNAL. That is, first the child becomes acquainted with certain facts in regard to locality through his own experience which he does not recognize as geography. When it becomes necessary to represent these facts to the eye, he is introduced to the map. Then from maps, he gains similar knowledge of localities distant from his home. Maps and pictures in this book are excellent and plentiful. Both relief maps and political maps occur that the natural as well as the political divisions may be represented. The pictures represent animal life, home life, and almost every phase of industry known to men.

The Grammar School Geography, consists of two books, an atlas and a text-book. The atlas is the ordinary quarto size, and contains not only most excellent and complete maps of every country and almost every division of every country on the earth, but 89 pages of *pictures alone*. The pages will average twelve pictures, so that we have a panorama of the world in these 1000 or more pictures given to elucidate the text and give the pupil a better idea of the world in which he lives and of the great family of mankind of which he is a member.

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AUTUMN TRAVELERS.—NO. 2.

PROF. D. W. DENNIS, EARLHAM COLLEGE.

Miss A. and her children set out for their second outing, Friday, October 2.

I fell in with Joseph who told me that all the lessons of the first excursion had been often reviewed with the gathered specimens; that Miss A. had asked them wherever they might be to seek some new lesson on seed gathering; that they had concluded from the many different kinds of plants found along the river on their first journey that currents of water as well as currents of air help to distribute many seeds; that he and James had brought in some strange plants which they found along the railroad and that some of the girls had also found some plants, new, as Miss A. said, to this vicinity, which they got at the grounds where Buffalo Bill gave his show; from which they had, he said, concluded that commerce and travel constitute an important means of seed scattering.

Not only Burns's "Daisy," but his "To a Mouse" and "To a Louse" had been studied and parts of one or the other had been memorized by all the children.

"But how," I asked, "does Miss A. get time for all this?"

"Oh, it don't take any time hardly; just a few minutes at the beginning of morning and afternoon school. We could not miss this, it gets us ready for our other work."

"And what part of these poems did you learn?" I asked.

“The verse of the ‘Mountain Daisy’ which makes the lark and the daisy friends :

“ ‘Alas it’s no thy neebor sweet,
The bonny lark companion meet
Bending thee ’mang the dewy weet
Wi’ speckled breast,
When upward springing blithe to greet
The purpling East.’ ”

“Just the subject” he added, after a pause, “which Miss A. said we would mainly consider to-day : mutual helpfulness between animals and plants.”

We had now reached the gate of the floral grounds of E. G. Hill & Co., east of the city, whither Miss A. and her flock had turned in. We passed along between the rows of long greenhouses, one for palms, one for roses, one for chrysanthemums, one for carnations, etc. The genial proprietor threw a door open and the children looked in on a quarter of a million roses; it was a moment for a painter.

“Why do numbers so impress us,” I asked, “surely the miracle all lies in the single rose.”

Miss A. observed that in his beautiful lake district, by Thirlmere, Wordsworth himself was overcome by numbers, and she quoted from his “Daffodils” :

“Ten thousand saw I at a glance
Tossing their heads in sprightly dance,
The waves beside them laughed; but they
Outdid the sparkling waves in glee ;
A poet could not but be gay
In such a jocund company;
I gazed and gazed but little thought
What wealth to me the vision brought.
For oft when on my couch I lie
In vacant or in pensive mood,
They flash upon that inward eye,
Which is the bliss of solitude,
And then my heart with rapture fills
And dances with the daffodils.”

We next passed on to the gardens north of the greenhouses where an endless variety of flowering plants—canna, geraniums, sweet alyssum, abutilon, phlox, verbena, salvia, petunia, etc.—are given a chance during the warm weather to live a natural outdoor life. A few of nearly every sort were still living their belated

summer life. The bees like men in harvest time, seemed by the way they worked to understand that it was then or never until after the winter reign that toil could sweeten life. Butterflies came and hovered over the long spurred varieties seeking nectar, and Miss A. requested Johnny to catch a large one, which he soon did under his hat, and she then unrolled before the children the long proboscis which so nicely adapts the butterfly to the deep corollaed flowers which he visits, and while she then held the butterfly with extended tongue, she asked Lucy to hold a larkspur by its side.

"Made a-purpose for the flower," said James, "or else," said Lucy, "the flower was made for him."

"It is," said Miss A. "a striking case of what naturalists call adaptation. Hundreds of cases can be seen in all of our yards and gardens. Before we are shut in for the winter, we will make a stroll expressly to meet cases like this. Just now, we must visit the canna beds"—canna groves she might have said. As we arrived at the south end of the long rows of scarlet and green, one brilliant flash of light shot by and then another and hovered over the flowers. They were humming birds seeking their share of the nectar.

It was decided by a single question and answer that bird, bee and butterfly all come to the flowers for food which they evidently greatly enjoy; that it pays them to come.

"But what," asked Miss A. "do the flowers get in return for this bounty?"

"They are not so lonesome," said Lucy, "with all these bright hued sunny visitors."

"In the matter of beauty and bright hues," said Jennie, "I should think they had enough of their own."

"May be," said Paul, "it is a matter of pure benevolence on the part of the flowers; this of itself is often pay enough."

Miss A. took a large gladiolus with protruding stamens and pistils and broke off a stamen with a long filament and shook its pollen out before the children.

"Unless some of this pollen," she said, "falls on the stigma of the pistil (she pointed these parts out) the plant will not mature seeds. It is also true that it matures seeds from which better plants grow if the pollen from one flower falls on the stigma of another. Now the bees and butterflies and birds,"

Miss A. paused interrogatively and Joseph finished the sentence, "carry the pollen from flower to flower. I have often," he added further, "seen the bees covered all over with yellow pollen."

"Yes," said Miss A., "and it seems that bees do not like to mix the nectars of several kinds of flowers and on each several journeys from the hive they visit the same species. This scattering of the pollen from one flower to another is called cross-fertilization."

Here Miss A. turned to the proprietor and asked if this crossing did not greatly improve flowers. Mr. Hill replied that it did and he invited us to see what he had himself done in this way.

We went first to a long greenhouse in which there were half a hundred thousand carnations, the most beautiful we ever saw, "the largest," said Mr. Hill, "that have ever yet been grown. I developed this variety by cross-fertilization," and each of the children bore one away as a trophy of the visit. We passed to a chrysanthemum bed where there were many hundreds ready to blossom. These Mr. Hill said he had raised from seeds obtained by the most careful cross-fertilization. He had cut all their stamens off and later he had brought to them, pollen from other flowers. Here then were a hundred unknown ventures in the work of creation. Mr. Hill said if one out of all was larger or more beautifully tinted or of rarer foliage than any heretofore raised, it would amply repay all the trouble. We all and especially the children wished him many successes instead of one.

We now went back to the outdoor flower beds where this barter of work for food was going on between the thousands of busy beautiful happy flowers and their friends.

"Does this which we see furnish any other reason beside Holmes's 'Why Flowers Are Beautiful?'" asked Miss A.

"Their guests might not find them if they were not so striking and so their pollen would not be carried for them," said Lucy.

"And why," continued Miss A. "is the air so laden by the flowers with an inviting odor?"

"For the same reason," said Paul. "It is thus that their friends find the flower beds themselves perhaps, and as well the flowers that grow behind bushes here and there."

"Guests, Lucy names the butterfly and bee and bird, and it is a good name," said Miss A. "for the flowers send out a double invitation; their gay banners and their perfume; the scientific

name suggests this, commensals are those who eat at the same table."

Miss A. now recited a translation of her own from Goethe :

A modest harebell; in the meadow grew up
And hung out enchanting, its little blue cup.
A bee came and sipped of its sweets daintily;
They must for each other be flower and bee.

We now went to Glen Miller—Richmond's beautiful park—and we venture to think a merrier company never passed along its flower-lined walks.

Large forest trees of all indigenous species were about us. Lucy, remembering that showy flowers are rarely on large trees asked Miss A. why this is so.

She answered with a question : "Do the tall trees need bees to scatter their pollen from tree to tree?" A dozen children at once answered with still another question. "Does not the wind scatter pollen for trees?"

"Yes, said Miss A., "and nature does not busy herself to do one thing in several good ways." Holmes however saw a moral lesson in the fact that the flowers of trees are inconspicuous;" and she recited from his "Spring has Come ;"

"See the proud tulips' flaunting cup
That flames in glory for an hour ;
Behold it withering, then look up
How meek the forest monarch's flower."

We stopped for rest under a large beech. It was covered with lichens. Every one must have seen them, the large, roundish, gray, wrinkled, leathery patches which boys when out gunning often select for a target. Miss A. asked some of the children to pull some of these off and tear them in two, and tell what they could see. It was done at once and all noticed that they were tough and Joseph who looked with Miss A.'s pocket lens reported a green streak in the middle between two gray ones.

"As in the case of the spores of the fern," said Miss A., "we can not see the real arrangement of these layers and of what they consist now ; we will, however, take a large one home with us and ask Prof. Thompson to cut a thin section and put it under the microscope for us ; we shall then learn that the lichen consists of two plants, a colorless one, mushroom-like and a green one. Green plants can live on inorganic food ; that is on air and water

and soil which has no decaying matter in it; colorless ones like the mushroom can not; they live on old chip piles or rotting logs or in foul water or somewhere where matter produced by life, that is organic matter, is decaying. Tender green plants like this in the middle layer of the lichen cannot live in dry air or in the sun. The lichen has rootlets and can cling high up on rock or tree where air and light which the protococcus—the green layer bears this name—so much needs are to be had in plenty; its exterior, as you have seen, is tough and can protect its protococcus from the dry air for a long time. The two, therefore, form a community in which each is indispensable; one for support and protection, the other for food which it makes of air and water and the dust that reaches it. Together they are and have been the pioneers of life everywhere. If a new rock appears above the sea, the spores of the lichen small like those of the fern find their way there by currents of air or water or from bodies of birds that light there or in some other way; little cells of the green protococcus are also carried thither and the community begins. Together these two plants have all the qualities of the pioneer; they are hardy, they require little, they are helpful, hopeful, courageous, they make the way pleasant for those that come after them, for soon gathering soil makes the inhospitable rock a fit home for higher and higher forms of life. They always remind me of two lepers who were seen in a community of lepers at Sandwich Islands: the disease had eaten away the feet of one and the hands of the other; the one with the feet carried the one with hands while he with a hoe tended the garden."

"My grand-father," said James, "was in the fight at Gettysburg and he saw a soldier who was blinded carrying one whose leg was broken and who pointed out the way from Sickel's outpost at the peach orchard to little Round Top."

"Our complex life," said Miss A., "in battle and sickness, in home and school is made up of opportunities for helpfulness. It is for this that we are differently constituted that we may help each other in the respects which we have and lack;" and she quoted from Schiller:

"For where the tender with the strong
Where mild and rugged meet in song
Is music's melody complete."

Jennie added: "Mamma had me memorize just this week from a book she was reading, 'The Mistress of the Manse,'

'Each did the duty that he saw
Both wrought at God's supreme designs
And under love's eternal law
Each life with equal beauty shines.' "

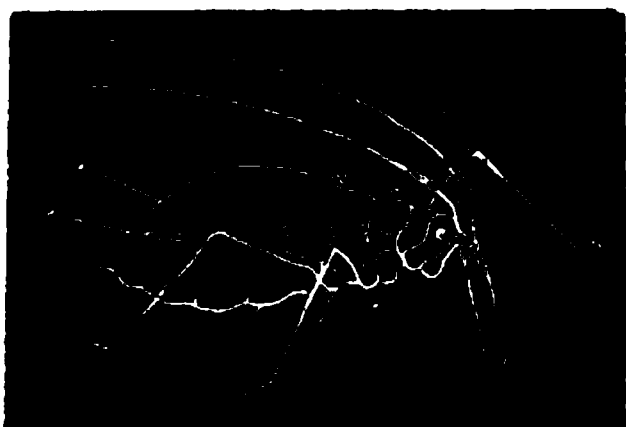
We thought of the father and mother birds in the "Vision of Sir Launfal" but did not venture to repeat the couplet then:

"He sings to the wide world and she to her nest
In the nice ear of nature, which song is the best?"

Miss A. now directed our return home by the Panhandle railroad and along the sides of the fill and the cut by the glen. The goldenrod was blooming in great numbers; very soon Joseph came running with a bunch that was covered with ants; he asked Miss A. what it could mean. Miss A. gave him her hand lens and asked him to look carefully to see if anything else living could be found on the flowers and what the ants seemed to be busy about. He looked for a long time during which his face would have interested a Van Dyck, and he added meaning to his face from time to time by a series of Hoosier ejaculations. "The golden rod is covered with plant lice Miss A.," he said at last, "and they are the same color as the plant."

"Do not mind about the color just now Joseph," she replied, "many animals resemble their surroundings; naturalists call this mimicry and your observation is very important but we will have to make that the subject of several excursions; what are the ants and plant lice, which we will call aphides doing?" After much help from Miss A., it was concluded that the glistening knobs on the abdominal stalks of the aphides are honey; that the ants greatly enjoy this; that when an ant taps with his antennae on the sides of an aphid he is rewarded with a drop of honey, that commensalism exists between the two, and that the ants were on the goldenrod for their evening meal or at least the sweets of it.

The cut shows an aphid. The honey is gathered in drops "honey-dew" on the ends of the stalks on the abdomen.



All summer long this relationship may be seen between plant lice and ants. The observer must hunt for the infested plants among all sort-grow in his neighborhood. It has been seen on the grape coleus and goldenrod.

"But what," asked Paul, "do the plant lice get for their kindness."

Miss A. answered this with an admirable description of the ant-hills of South America; many parts of this description were only incidental to the answer; these, she said they would consider in detail in later excursions.

"These hills," she said, "are officered and every ant understands his duty; like our ants they like the honey of plant lice and the trees on which these lice feed are tall and a trip up and down before breakfast would be no small task for all the colony. The ants therefore have arranged stalls in the ant-hills and have brought the plant lice down and they gather their favorite leaves and fodder them in the ant hills. So shelter and food are provided by the ants, and the guests on their part provide honey to the taste of the ants." "That," said Frank, "is like the arrangement between man and his cow; man furnishes shelter and protection for the cow and the cow furnishes him milk, meat and her skin for leather."

"Yes" said Miss A., "there are very many cases of commensalism between man and animals and man and plants and from time to time we will work these out. It will be found in every case that the friendly relationship arises from mutual helpfulness. It is a law deep rooted in the nature of things that 'He who would have friends must show himself friendly.'"

"Life is a vast community. All virtues do not belong to one species, any more than they all belong to one student in the school. Cowper gives us this lesson from the 'Nightingales and Glowworm.'"

"A nightingale that all day long
Had cheered the village with his song,
Nor yet at eve his note suspended,
Nor yet when eventide was ended,
Began to feel as well as he might,
The keen demands of appetite;
When looking eagerly around,
He spied far off upon the ground,
A something shining in the dark,
And knew the glowworm by his spark.
So swooping down from hawthorn top,
He thought to put him in his crop;

The worm aware of his intent,
Harangued him thus quite eloquent :
' Did you admire my lamp ' quoth he,
' As much as I your minstrelsy,
You would abhor to do me wrong,
As much as I to spoil your song ;
For ' twas the self same power divine
Taught you to sing and me to shine ;
That you with music, I with light,
Might beautify and cheer the night. '

The songster heard this short oration,
Then warbling forth his approbation,
Released him as my story tells,
And found a supper somewhere else. "

We heard a few days ago a parent of one of Miss A.'s pupils say, " since my children entered her room they are better at home—more obedient and more cheerful. " The reader can guess why.

It was growing late, a few of us hurried up to the street car station ; the others went off each by the shortest way for home. Happy good nights were passed back and forth along the diverging lines. The stars just then did not have Holmes's reason for twinkling over High-Point.

METHODS.

LILLIAN QUICK, COLUMBUS, IND.

There is a countless number of young teachers, who have this year taken charge of their first schools, and whose discouragement will be mostly along the line of primary work. Already we hear on every hand the cry, "What method shall I use?"

There are so many methods ; the word method, the sentence method, the phonic method, the analytical method, the synthetic method, etc. It is no wonder that young teachers become confused. As Arnold Tompkins says, "The compass that guides the teacher out of the woods is the fact that every subject contains its own method. The method of a given subject is not something to be applied to it ; it is the life and structure of the subject itself."

Then do not waste your time, my dear new teachers, in trying to learn how some one else teaches, but study the subjects you teach as though the salvation of the children and the consequent progress of the world depended upon your efforts.

Decide *what* you will teach, think *why* you will teach it, study until you are full of the subject then you will know *how* to teach it.

The reason many teachers fail is the fact that they are not willing to pay the price of genuine success,—*hard unremitting study of the subjects they teach.*

The time has come when history, science and literature must have their place on every primary teacher's program. You can not teach these subjects successfully if you depend upon the knowledge you have previously obtained in school. You should be a student with a mind of fresh ideas. Pupils soon recognize a stagnant pool.

Perhaps you are teaching the discovery of America this month: if so, you should know all the causes leading up to it. This will take you back to the Crusades, the Revival of Learning, etc. Your pupils are, perhaps, too young to study all this, but if you do not understand it, how can you make the great fifteenth century real to the children? How show them what heroism that marvelous voyage of Columbus on an unknown ocean cost? As a well known superintendent says, "What is more fascinating than to step into a school room and see a teacher with intellectual margin broad enough to enable him or her to be a perfectly free instructor?"

You realize that Natural History must be taught in your school. Are you trying to find out how others have taught it? I say again, my dear young teachers, don't waste your time but study. Study Natural History more deeply than you have ever studied it before. Perhaps your pupils are to study some special animal next week. You should study this animal until an unusual amount of interest is awakened in your own mind. Learn all you possibly can about it by observation and then read what others have written. When you become sufficiently interested you will find the method for teaching it that is best adapted to you and your school.

Children love plants. Are you going to take them into your school room and have your pupils study them systematically?

If so, study the plant and when you have studied sufficiently, the method will come.

Take some common flower. You have seen it perhaps since your childhood and passed it by as a common weed. Oh, there is so much in this plant! Do not be satisfied until you learn all you can about it. Do not be satisfied then. Probably, when you have learned all you can you have only made a beginning. Remember what Tennyson has said :

“Flower in the crannied wall,
I pluck you out of the crannies ;
Hold you here, root and all, in my hand,
Little flower, but if I could understand,
What you are, root and all, and all in all,
I should know what God and man is.”

We should be true lovers of nature. There should be a kindred feeling between us and the hills and mountains, the rocks, the streams, the leafy trees, the green meadows and all the living creatures God has made. When this love has taken possession of our hearts we can easily find a way of our own for teaching the subject. The method comes in our intense desire to make our pupils feel in some degree what we ourselves feel.

Are you to teach some poem to your pupils? Study it more deeply than you have ever studied a poem before. Think about the beauty of thought expressed in it. Read the life of the author. You do not expect your pupils to learn all you do but study until you can teach out of yourself, from the richness of your own wisdom.

Once there was a superintendent who requested his teachers to teach the subject of Longfellow for six weeks. He gave no methods and no suggestions, but left his teachers to “work out their own salvation” which the first grade teacher did literally “in fear and trembling.” She knew comparatively little about Longfellow and his works, and soon found she could not teach the subject for that length of time without more preparation than she was in the habit of making. She bought the biography of Longfellow in three volumes and studied it with his poems. Soon she was intensely interested and so were the pupils. The more she studied, the more enthusiastic she became. Indeed, six weeks were not enough to spend on the subject. Do you suppose when she was so full of the subject, that she wanted any one’s method

but her own for presenting it? To be tied down to some method when full of a subject, would be like putting Pegasus to the plow. This teacher would probably not teach the same subject in the same manner again, but that study has had an influence on her life and teaching that is felt to this day.

In history, literature, numbers, all departments of science, whatever you teach become interested and enthusiastic and you will succeed. Study and think. Let your method be the outgrowth of your own mental development.

It is the thinking energetic teacher who takes her place in the first rank. It is often hard to be energetic when our school closes for the day, when, perhaps, both heart and mind are weary, but we should train ourselves in habits of study. Many teachers will say there is no time for so much work. It would be better, perhaps, if we only taught half a day and spent the other half in study, but we must take the conditions as we find them and learn to make the best use of our limited time.

I say again *study and think*. But do not let discouragement take possession of you. We can never do all we wish. We can never reach our ideal. "We can only do our best."

A LIVE SCHOOL FOR LIVE TEACHERS.

MISS DOLLISON, LOGAN, O.

Under the auspices of the American Book Company, a complete Normal School was held in Chicago from August 10th to 22nd. It was planned and directed to meet the needs of the music teacher in the public schools, at the least possible cost to the student. Considering this fact, together with the picturesque locality of the Oakland Club, where the school was held, it is no wonder that nearly every state in the union was represented in that enthusiastic body.

On the morning of the 10th we assembled, many of us being entire strangers to the place and to every one there. But when each was given a song book, and Prof. Griggs, of Denver, took his place in front of that immense chorus, we felt that we had known him always; and as our voices took up the greeting song all formality vanished. Under the magic touch of music and the divine influence of song, the East and the West, the North and the South were one. With such a beginning success was sure.

The school lasted two weeks, each day of which the students gathered inspiration and new ideas to be carried into useful practice in his work for the coming year.

With what intense interest did we welcome each member of the faculty as he or she appeared before us for the first time. In Mr. Ripley we recognized just the substantial help each needed. He gave us no visionary theories and no "hobbies to ride." Each step of the "Natural Music Course" had been thoroughly tried and proved before it was given in book or chart. In his sincere manner he led us to see how the difficulties in music are overcome in the arrangement of the course, each new thought being rendered so simple that the child learns through interest—not effort. With all his experience, Mr. Ripley was ever ready to listen to a new thought from any member of the class, and he seemed to find some useful suggestion or help in all.

Mr. Tapper impresses one as the ever ready man. He says no word that does not count. Having traveled in France, Germany and England in pursuit of knowledge on this great work of teaching music in the public schools, he is fully prepared to select the most useful and helpful ways and means to success.

Mr. Tomlins, of Chicago, the most successful expression teacher in the world, was greeted with applause by the entire school. He impresses one with the child-like sincerity of his words. His lectures are full of wonderful and original thoughts. All the truth, purity, and pride of self-culture, hidden in the recesses of the heart, sprang into birth and life under the magic influence of his words. He made one feel at his best and equal to any task wherein some one might be benefited in this big selfish world.

To him expression in music means:

"Do all the good you can,
To all the people you can,
In all the ways you can,
And just as long as you can."

Mr. Matthews, of Chicago, and Mr. Bach, of Milwaukee, gave us interesting and useful talks on the trials of the music teacher, and each in a kindly way strengthened us for our work. Mr. Griggs and Mr. Bach were also helpful to those who could not attend the first week, going over all the course with them, and at the same time giving them opportunity to take advanced work.

Too much cannot be said in praise of the lady members of the faculty, Mrs. Thomas, of Detroit, Miss Love, of Muncie, Ind., and Miss Hofer, of Chicago. The most timid student could approach any of them with perfect serenity, for they are whole-hearted, sympathetic women.

Using the class as primary pupils, Mrs. Thomas and Miss Hofer illustrated the best ways to teach music to little children, how to keep their attention and give them some new thought to call their own, each day. Miss Love in her chart work and sight-reading class proved herself a thorough teacher, and had an enviable way of keeping her class interested.

Physical Culture was taught by Mrs. Louise Preece, of Minneapolis. This lady is the embodiment of grace and strength. She appealed to us to look ever to the physical beauty of the body in the midst of our schoolroom duties. Her work, coming as it did in the middle of the forenoon session, gave us the most complete rest that exercise can give to the brain-laboring student.

Miss Mary Gilbert, a bright and enthusiastic young lady of New Bedford, Mass., had charge of the department of drawing, and did excellent work in the limited time.

Prof. C. C. Curtis, of Minneapolis, gave instruction in penmanship. He is an artist with the pen, a refined and pleasant gentleman, and a successful teacher.

The social features of the Normal must not be overlooked. Mr. C. C. Birchard, of the American Book Company, was general manager. Under his watchful eye and that of his assistant, Miss Mary R. Pierce, all needs were supplied and individual attention was given to the comfort and advancement of each member of the school. The evenings were devoted to receptions, concerts and lectures.

All interested in the advance of public school music will be glad to know that the New School of Methods is permanently established and we believe that from year to year the progressive teachers will seek to take advantage of the opportunities it offers.

PRESCOTT, the capital of Arizona, boasts that its streets are being literally "paved with gold." The granite used for pavements yields four dollars in gold and twenty cents in silver to every ton, so that in time, when less expensive methods of reducing ores are used, it may pay the city to tear up its street pavements.

MUSIC IN THE COMMON SCHOOLS. (III.)

W. E. M. BROWNE.

Before going further into the reading of music from the staff, it is important that the understanding of the rhythmic idea of music be made more clear to the novice, and for this purpose, this chapter is devoted to the study of

MEASURES.

This term suggests the idea of their use, which is to measure or regulate the accents, which occur at regular intervals through the song. This accent must always fall upon an accented word or syllable of the poetry, which is being sung, and to bring this about, the length of the tones used vary in length, some being long in duration, while others are very short. The characters used for this purpose are called "*notes*" which by their different shapes designate the different length of tones to be used.

The melodies written in figures on page 764 provide easily for the study of "rhythm" where the sounds are of uniform length; but to vary them, it will be necessary to write under each figure a note which shall show the length of the tone to be sung.

The quarter note (see diagram "B") may be called the unit of tone length, from which the value of all the other notes may be determined, and represents a tone, the duration of which is about the same as the time used in taking a step in ordinary, or moderate walking.

The first drill in this work should be in singing melodies, like the following, written upon the blackboard, comprising eight measures, and such intervals as have been, or are being learned :

$\frac{2}{4}$ 1 2 | 3 2 | 3 4 | 5 5 | 6 5 | 4 3 | 2 3 | $\overline{1\ 1}$ || and

$\frac{2}{4}$ 3 4 | 5 4 | 3 1 | 2 4 | 6 5 | 6 7 | 8 7 | $\overline{8\ 8}$ || under each

figure a quarter note being written. The heavy or "double bar" is used to show the end of a phrase or exercise.

Insist upon the first sound in each measure being accented, and notice that notes over which the tie (—) is placed are to be sung as one tone equal in length to the combined single tones.

The sign $\frac{2}{4}$ preceding each exercise, means that each measure is composed of two parts, one loud and the other soft, and that each

of these parts is equal in time to that of the quarter note. If a movement of the hand is used to mark the parts, the downward motion will mark the first or accented part, and the upward motion the second or weak part. The lower figure of the sign ; shows that a tone shown by a quarter note is to be sung for each motion of the hand. Except to enforce the idea, it is not necessary that children be required to make these motions when singing, but the teacher should by either counting aloud, "one, two, one, two," etc; moving the hand steadily, "down, up," etc, or tapping upon the desk for each part, keep the movement of the song for the pupils uniform and unvarying.

When the school has, through practice, become familiar with the singing of the "quarter" note, the "half" note, (see diagram "B") may be introduced in this manner :

$\begin{array}{c} 2 \\ 4 \end{array} \overline{1\ 1} \mid \overline{2\ 2} \mid \overline{3\ 3} \mid \overline{4\ 4} \mid \overline{5\ 5} \mid \overline{6\ 6} \mid \overline{7\ 7} \mid \overline{8\ 8} \parallel$. The "half" note representing a tone equal to that of two "quarter" notes combined, the teacher will write under each two quarter notes tied, a half note. By singing, first, without observing the "tie," and then following with a repetition in which the effect of the tie is enforced, no difficulty will be found in fixing the idea of the longer tone in the minds of the children, who will soon notice that the value of the half note is two motions of the hand. Write melodies like the following for practice, placing under each single figure a quarter note, and each tied couplet, a half note :

$\begin{array}{c} 2 \\ 4 \end{array} \quad 1\ 2\overline{3\ 3}\ 4\ 3\overline{2\ 2}\ 3\ 4\overline{5\ 5}\ 6\ 5\overline{3\ 3}\ 3\ 2\overline{1\ 1}\ 2\ 3\overline{4\ 4}\ 3\ 2\overline{5\ 5}\ 6\ 7\overline{8\ 8} \parallel$

The tone shown by the quarter note may be divided into two shorter sounds, equal in length, which will be shown by the "eighth" note, (see diagram "B").

To sing these, two tones must be sung for each motion of the hand, which must move exactly, no faster nor slower, as in the foregoing examples. As some difficulty may be had in getting small pupils to grasp this idea, introduce it by having them sing "la, la," while your hand goes "down, up;" then have them sing faster "la, la, la, la," while your hand goes "down, up" in exactly the same time. Examples for practice may be written thus

$\begin{array}{c} 2 \\ 4 \end{array} \quad 1, 2, 3, 4, \mid 5\ 5 \mid 6, 5, 6, 7, \mid \overline{8\ 8} \mid 8, 7, 6, 5, \mid 4\ 4 \mid 5, 4, 3, 2, \mid \overline{1\ 1} \parallel$

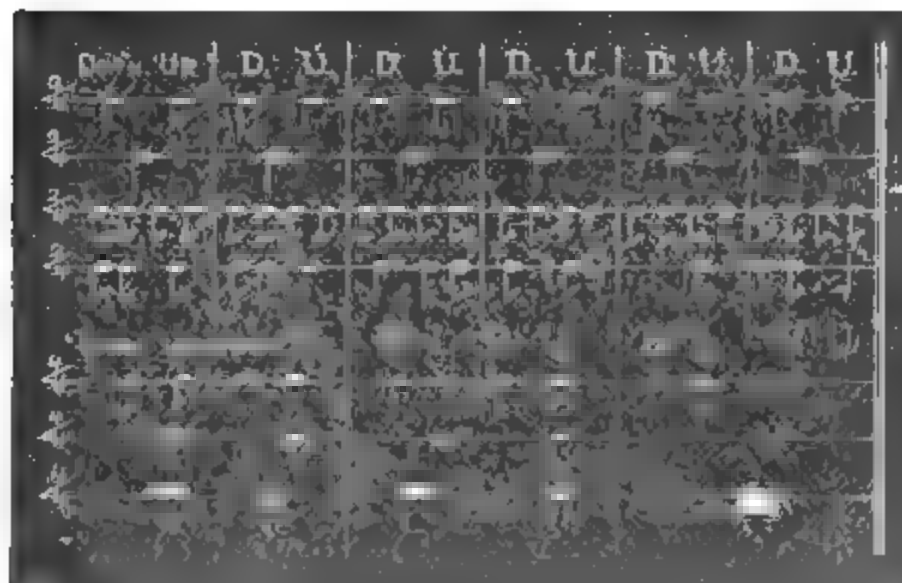
Under each figure followed by a "comma" write an eighth note, those without commas, a quarter note; and those tied, a half note

In the first example shown in this chapter, if the first, third, fifth and seventh bars be removed, we will then have an exercise of four measures instead of eight and each measure will have four parts instead of two, the effect of which will be to place the accents a greater distance from each other and thereby lessen their number. These measures will be marked $\frac{3}{4}$ and shown by four motions (down, left, right, up) of the hand, and with this exception, they are treated just as the $\frac{3}{4}$ measures and admit of the use of two additional notes representing respectively sounds equal to three quarter notes combined, the half note and dot; and four quarter notes combined, or the whole note; the first named being in duration three motions of the hand. The following diagram will assist in showing the relative value of the five different notes discussed in this chapter, comprising all the simple note forms commonly used.

In writing exercises, they should consist of either four or eight measures as this is the length of the poetic phrase, and children should become accustomed to having phrases of four, or multiples of four measures. Eight is the usual standard. The number used in this diagram is limited by the size of the page.

The signs of silence, called "rests," correspond to the notes in duration and are shown above. The "hook" of the "quarter" rest *usually* being at the bottom, but if at the top of the stem, points to the right; the "eighth" rest resembling a figure 7; the "half" rest being above the line, and the "whole" below. They are treated in matter of time exactly as notes.

DIAGRAM B.



"Quarter" Notes.

"Half" Notes.

"Eighth" Notes.

Rests: Quarter
and Eighth.

Three Quarter
and Whole Notes.
Half and Whole
Rests.

APPERCEPTION IN ELEMENTARY WORK.

CHAS. A. McMURRY.

For several years, much talk has been going the rounds among teachers as to whether the term *apperception* stands for an important idea or not. The question that always comes up is this: What use can we make of our experience and previous knowledge in more quickly and economically getting new information? This idea not being a new one, the question naturally arises, why are we making so much ado about it? But if apperception means a somewhat new interpretation of the process of learning, a new and greatly increased emphasis of an old principle, it will well repay a thoughtful examination by teachers.

It is not difficult to give clear proofs that the quickness with which we understand and master new problems and experiences depends not only upon our natural ability, but equally or more upon our knowledge and experience. The old farmer of thirty years' experience will do much more effective work in a spring day than the brilliant but inexperienced novice. A slow moving intellect is more than compensated for by the rich fund of experience and knowledge that he brings to bear upon this problem, (the putting in of spring crops).

It is a real comfort and encouragement to a slow child in school that what he has mastered with great labor and difficulty is found very serviceable in later lessons, and that the thorough mastery of earlier lessons makes him quicker than some of his more talented companions in overcoming later difficulties. The child's ability to meet and master new problems in arithmetic depends only in part upon his natural quickness and strength of mind, but also in part upon the readiness with which he can recall and apply the principles of arithmetic already learned. I take it to be a fact in the experience of the world that many persons of second rate mental powers are called upon to exercise leadership over others of first-class native powers because the former have a greater extent of well-organized knowledge and experience. For the purposes of life, thoroughly mastered and well-organized knowledge is a very strong substitute for great natural ability. Where these two things are combined, we have the highest result of mental training.

Apperception lays double stress upon genuinely assimilated knowledge, that is, upon knowledge worked over into experience and practice, so as to flow into service at an instant's notice. The knowledge already acquired in a study is not for storage nor for ornament, but for use as an instrument for more rapidly enlarging one's knowledge of that subject. A person who knows German, having had much occasion to hear it spoken, will find himself quickly at home among a company of Germans and will rapidly enlarge his experience among them, while a person unacquainted with German could make scarcely any progress at all in the course of an evening. A new student going into an algebra class two months after the class has begun this study will find himself totally blind to what is going on. He needs a knowledge of the simple elements of algebra before he can catch even a glimmer of meaning from what the class is doing. A child that knows his letters and a small number of simple word forms can make rapid progress in learning to read, but a child of equal natural ability with no knowledge of letters and words can make very little headway at first. Such cases of apperception as these just mentioned are so self-evident that they are scarcely thought of as illustrations of apperception. But the principle that applies in them and is so easily over-loaded may be found hidden and often overlooked in nearly every act of learning. It may be well to call distinct attention, at this stage, to the teacher's blunders when he fails to take notice of this principle.

In first learning to read, the sounds, syllables and words learned one day should be expressly remembered and employed to interpret the syllables and words that come up in the lessons of the following days. Many teachers of primary reading fail to require children to use what they already know, thus reviewing it and fixing it more distinctly in mind. There is nothing of more practical value than requiring children to make constant use of what they learn from day to day. In language exercise it has been noticed by good teachers that children go on from term to term and from year to year making much the same blunders, showing that they do not use and learn to constantly apply the simple rules which are illustrated and explained in the regular language lessons. Too many teachers are satisfied with having children learn and recite lessons without inquiring more closely into a turning into practice and habit (apperception) of what

they learn. It is apparent from the illustration just given that apperception has to do not only with the first acquisition of knowledge, but also with its final use and conversion into habit. Apperception in this latter sense, when it is worked over into habit, becomes unconscious and automatic, but it takes a great deal of care and labor on the part of both teacher and pupils to bring knowledge to this perfected state.

The study of apperception is a study of the interaction between what we already know and what we are just trying to learn and understand. It is a study of the quickest and most economical way of acquiring knowledge. If in this examination, we find that what we already know is our chief instrument in acquiring something we do not yet know, we shall have more respect for the principle in question. I suggest, therefore, to teachers in ungraded schools to ponder this question. To what extent are children hampered in their progress by not remembering and making use of what they have already learned?

PRIMARY DEPARTMENT.

Edited by MRS. SARAH E. TARNEY-CAMPBELL, Supervisor of Instruction in the
Anderson Schools.

One day alone of all December's blest,
The dying year's most rare and splendid flower,
Earth's dearest prize and heaven's most costly gem ;
For on that day from sin mankind had rest,
And knew again its long-lost spiritual power,—
That day a child was born in Bethlehem.
—John Albee, in *The Outlook*.

CHRISTMAS.

The story of the babe born nearly two thousand years ago is the story the teacher has the privilege of telling again this closing month of 1896. If told as a myth to be credited or not, the teacher has missed a great opportunity. She will be most successful in her Christmas lesson who will leave with her pupils a sense of a real elder brother who lived long ago, but whose loving presence is with us and about us, inspiring us to deeds of self-forgetfulness and helpfulness. Such an impression cannot be made in a single talk. Let frequent stories of helpfulness to others be told during the month of December; plans for gifts for

parents and brothers and sisters be made and carried out; the "old, old, story" sung and recited; the beautiful pictures of the Christ-Child placed where all can see; and the great lesson of Christmas Day, "Peace on earth, good will to men" will surely be a reality.

LEGENDARY STORY OF THE VIRGIN MARY.

Joachim and his wife, Anna, had lived for long, long years in their pleasant home among the hills. Joachim had cared for his flocks and droves of cattle, and Anna had made beautiful and homelike the house in which they lived, besides finding time to visit the poor and sick in the neighborhood.

These people were very wealthy and they divided their money into three parts—one for themselves, one for the poor, and one for the Lord.

On a certain day, Joachim went to the temple to offer his doves and lambs as sacrifices. The priests told him the Lord would not accept his offering because he had no children. He then looked over the record of all the tribes of Israel and found he was the only one out of all these who had no children. He turned away exceedingly sorrowful, and on reaching home told his wife all about it.

Poor old Joachim felt he was disgraced when the Lord would not accept his sacrifice, and he went out to the hills to forget his disappointment in taking care of his sheep. But over and over he said, "Oh, Lord, if you would only send me a child! I should certainly dedicate it to you!"

While lifting up and carrying a lamb that had fallen behind, an angel came to him. "Oh, Joachim, I have heard your wish, and I will grant it on condition that your child shall be sent to the temple to be dedicated to the service of God."

Joachim put the lamb down and hurried home. He was met at the beautiful golden gate surrounding the garden by his wife Anna. She hastened to say that an angel had also come to her, saying a little baby would be sent them if they would promise that the child might live at the temple and serve the Lord. She said she had promised.

So Joachim and Anna watched and waited for their baby to come. They were so happy planning what they would do for their baby boy—for they were sure the baby must be a boy. Girls were

not of much account in those days. After a while the baby came, and a girl baby it was. But an angel came to tell them that the Lord would be just as much pleased with a baby girl as a baby boy, and that she should go to the temple just the same.

They named their baby girl Mary, and in all the years since she lived, the name Mary has been a favorite over almost all other names, for little Mary was a lovely, lovable, happy, helpful little girl and one of the most womanly, brave and Christian women that has ever lived.

As I said, Mary was a happy, lovable little girl with blue eyes and long golden curls. It is said of her that she never spoke a naughty word and never did a naughty thing. Almost from the time she was in the cradle, her mother Anna, told her all about the temple and where she was going to live; about the priests, God's servants, and God himself. And all this time she also taught her how to weave, which was one of the principal things women had to do, and also how to cook. So while Mary had plenty of time to play she was also kept quite busy.

But time flew rapidly and soon little Mary was three years old—old enough, the old priest Simeon said, to come to the temple to live. So on her third birthday, Joachim and Anna, sad to part with their little girl, and yet happy that the Lord had chosen her for his work, went with Mary to the steps of the temple—as far as they were allowed to go. They stood at the bottom of the steps, the old priest Simeon stood at the top, and little Mary was left to climb the steps alone. She kissed her parents good-bye and then slowly climbed up the great steps. The fond parents never forgot this sight of their only child, their little Mary, slowly making her way up to the great temple. Her golden hair streamed out behind, and now and then they could see the heaven-blue eyes that seemed to shine with a new light. Her little face seemed almost transfigured in its beauty.

Finally she reached the top and the priest took her up in his arms and kissed her and said, "Oh, Mary, the Lord has chosen you for his great work." Then they passed into the temple and old Joachim and Anna went back to their lonely home.

Mary's life in the temple was in many ways a very busy one. She learned to do many kinds of work such as embroidering altar clothes and robes of different kinds for the priests. Beside this, daily she was taught about her religion. It is said she was such

a good girl that all the other girls in the temple looked upon her as being entirely too holy for them to talk to. And some of her teachers said that whatever they went to teach her, they found she already knew.

Thus the years passed until Mary was fifteen. Then the priest one day told her it was time for her to be married, and word was sent out all over the country to the young men that those who wished a wife might present themselves at the temple.

Many curious stories are told about this choice. Among others it is said each young man came with a staff and they were all laid on the floor. Out of one of these sticks there came green leaves surrounding a beautiful white lily. This staff belonged to a man named Joseph, a carpenter by trade. This was a sign that Mary was to be his wife.

So it came that the old priest married Mary and Joseph and Mary left the temple and went to live with Joseph.

SAINT CHRISTOPHER.

Saint Christopher wanted to do something to serve the king of earth and heaven ; and he went to the cave of a good hermit, who said :

“Knowest thou a certain river, stony, and wide, and deep, and often swollen by the rains, so that many people perish who attempt to pass over?”

And Saint Christopher answered, “I know it.”

Then said the hermit, “go to that river, and use thy strength to aid and to save those who struggle with the stream, and those who are about to perish.” To this Christopher replied joyfully :

“This I can do.”

So he went as the hermit had directed and he dwelt by the side of the river ; and having rooted up a palm-tree from the forest,—so strong he was and tall,—he used it for a staff to support and guide his steps ; and he aided those who were about to sink, and the weak he carried on his shoulders across the stream ; and by day and night he was always ready for his task, and failed not, and was never wearied of helping those who needed help.

Christopher one night heard a voice which called to him in a plaintive manner. It was the voice of a child, and it seemed to say, “Christopher, come forth and carry me over !”

And he arose and looked out, but saw nothing. Then he lay down again ; but the voice called to him in the same words a second and a third time ; and the third time he sought round about with a lantern ; and at length he beheld a little child sitting on the bank, who entreated him saying :

"Christopher, carry me over this night." And Christopher lifted the child on his strong shoulders, and took his staff and entered the stream.

And the waters rose higher and higher ; and the waves roared, and the winds blew ; and the infant on his shoulders became heavier and heavier, till it seemed to him that he must sink under the great weight ; and he began to fear. But nevertheless, taking courage, and staying his tottering steps with his palm-staff, he at length reached the opposite bank ; and when he had laid the child down, safely and gently, he looked upon him with astonishment and he said :

"Who art thou, child, that hath placed me in such peril? Had I carried the whole world on my shoulder the burden had not been heavier !"

And the child replied :

"Wonder not, good Christopher ; for thou has not only borne the world, but Him who made the world, upon thy shoulders. Me would'st thou serve in this work of charity ; and behold, I have accepted thy service and thee. Plant thy staff in the ground, and it shall put forth leaves and fruit."

Christopher did so, and the dry staff flourished as a palm-tree in the season, and was covered with clusters and fruit ; but the Christ-Child had vanished from sight. E. E. HALE.

AN excellent Christmas story may be found in the Indiana Third Reader.

WHEN John Eliot, the Apostle to the Indians, lay in his eightieth year, upon a sick-bed, he was found, upon what proved to be the day of his death, busily employed in teaching a little Indian child the alphabet. Urged to rest, he replied, "I can no longer preach, it is true, but I can do this and I must be at work."

LEND A HAND.

[This department is conducted by MRS. E. E. OLGOTT.]

“Look up and not down,
Look forward and not back,
Look out and not in;
Lend a hand.”

Since there is so much Child Study from the teacher's standpoint, perhaps we may find “something to think about” in this little poem, which might be called Teacher Study from the children's standpoint.—[EDITOR.]

WHEN THE TEACHER GETS CROSS.

When the teacher gets cross and her brown eyes get black,
And her pencil comes down on the desk with a whack,
We chilluns in class sits up straight in a line,
As if we had rulers instead of a spine !
It's scary to cough, and it's not safe to grin—
When the teacher gets cross and the dimples goes in.

When the teacher gets cross, the tables all mix,
And the ones and the sevens begin playing tricks.
The pluses and minus is just little smears
When the cry-babies cry all their slates up with tears.
The figgers won't add, and they act up like sin—
When the teacher gets cross and the dimples goes in.

When the teacher gets cross, the readers get bad,
The lines jingle round till the chilluns is sad,
And Billyboy puffs and gets red in the face,
As if he and the lesson were running a race !
Till she hollows out “Next” as sharp as a pin—
When the teacher gets cross and the dimples goes in.

When the teacher gets good, her smile is so bright
The tables get straight and the readers gets right,
The pluses and minus come trooping along,
And figgers add up and stops being wrong,
And we chilluns would like (but we dassent) to shout,
When the teacher gets good and the dimples comes out.

—*Rochester (N. Y.) Express.*

The following is an effective little Christmas story for primary pupils, especially if it be told the day that school closes for the holiday season, and if the teacher provides herself with a bit of holly to add a touch of the realistic.

A BRANCH OF HOLLY.

I.

A branch of holly smiled in the December sunshine. "You are beautiful" whispered the fir tree, "why are your leaves so green and your berries so very large and red?"

"I have worked with all my might" replied the holly branch, "I want to help to make the world bright and happy. I hope, oh, I do hope, I shall be gathered for Christmas decoration!"

"No one ever comes here" sighed the fir tree, "so you might as well have been idle."

"God sees me, replied the holly branch, and he will know that I have done my best."

"To make the world happy,"
The holly branch said,
"My leaves are so green
And my berries so red."

II.

"Oh, so much holly and so beautiful," cried a happy voice, "if we can sell all this, we shall have enough Christmas money to buy presents for everybody."

A little girl in thin, worn clothes was helping her brother to gather holly to send on the cars to a distant city to sell for holiday decoration.

"Oh, there is the most beautiful branch of all," she exclaimed, "how lovely it looks against the dark fir tree! Let me carry it, please, it makes my heart glad to look at it."

"Good bye, friend fir tree," said the holly branch, "I am so glad that I worked with all my might, for, you see, I *am* helping to make the world bright and happy."

"Let's keep this branch for ourselves," said the little girl, "it is so beautiful."

"Wouldn't that be a little selfish, to keep the prettiest for ourselves," suggested her brother. "We can have so much holly, if we choose to gather it, while some people in the city can have only one little branch. Suppose we should send this with the rest and call it our Christmas present to somebody who can't have so much as we."

"Yes, that would please the Christ-child better," said the little girl.

So she laid it with the rest and said, "Good bye, beautiful holly branch, why are your leaves and berries so lovely?" She did not hear its soft answer, but

"To make the world happy,"
The holly branch said,
"My leaves are so green
And my berries so red."

III.

"How nice that we have so much holly," said the ladies who were decorating a church, "there's Christmas cheer in its bright berries and leaves."

"Here is the most beautiful branch, I ever saw," said a sweet-faced lady. "I believe I will take it home, it would look so lovely at the window. No, I won't either, so many more could enjoy it here, it would be selfish to keep it just for myself. I'll put it here." So she fastened it with a scarlet ribbon, close to the splendid Christmas tree, saying, "I wonder why these berries and leaves are so very large and bright." If she had listened, she might have heard the soft answer,

"To make the world happy,"
The holly branch said,
"My leaves are so green
And my berries so red."

IV.

Such a happy Christmas eve it was. The church was crowded with merry children. They sang joyful Christmas songs, and laughed with glee when Santa Claus took, for each one, from the loaded boughs of the Christmas tree, presents of candy and oranges. They closed with the song the angels sang on the plains of Judea, "Peace on earth, good will to men."

One little boy lingered as the others were leaving.

"What is it, my lad?" asked the sweet-faced lady.

"If you please," said the boy, "my little sister has been sick a long, long time, and could not come to-night."

"Didn't Santa Claus give you candy and oranges for her?"

"Yes, but—" he said timidly, "she never saw any holly in all her life. Mamma used to live where holly grows, but I never saw any till to-night, and sister has only seen pictures of it."

"She shall have some for her very own," said the lady quickly, and she untied the scarlet ribbon and gave him the beautiful holly branch.

"Thank you, thank you so much," he cried, and as he hurried home, he said lovingly, "Oh beautiful holly branch, did you grow so lovely just for little sister and me?"

The wind heard the soft answer:

"To make the world happy,"
The holly branch said,
"My leaves are so green
And my berries so red."

V.

The little sick girl's eyes grew bright when she saw her presents, but she prized the holly branch most of all. It made the whole room bright for her, and she prized it more each day.

One morning she said: "Mamma, I should like to string walnut kernels, and soft bread crumbs and popcorn and hang them on my holly branch, and fasten it outside of the window to make a 'Happy New Year' for the birds."

So the mother propped her up among the soft pillows, in her little bed, and she strung the kernels and crumbs and popcorn herself.

Her brother fastened the holly branch outside the window.

She enjoyed the whole day, and clapped her weak hands softly many times, to see how happy the snow birds were on the holly branch. That night the wind blew fiercely and the snow fell fast.

"You have done well, little holly branch," said the wind kindly, "and I'll take you to bed."

So it tore the holly branch from the window and bore it a long, long way, and left it in a snug nook with many maple leaves.

"The snow flakes said gently, "we will cover you with a soft white blanket, little holly branch. You have been kind and unselfish yourself, and you have made others kind and unselfish. Now it is time for you to go to sleep."

So the tired holly branch nestled down among the sleepy maple leaves, and there was a soft murmur:

"To make the world happy,"
The holly branch said,
"My leaves are so green
And my berries so red."

Then it went to sleep for its work was done.

A SCIENCE LESSON.

An interesting science lesson is well described in the following "essay" by a primary pupil in one of the ward schools of Louisville, Ky.

It is so simple that it may be given to the primary grades in any school, either in city or country; and besides being interesting and instructive, what could afford a better written exercise in language work?

There were many others in the class quite as good, but this essay was written by a little girl who was born in France. When only two or three years old she came with her parents to the United States. Only French is spoken in her home, and it is her teacher's opinion that little Louise *thinks* in French. Then how much the more credit she deserves for so clearly expressing herself in English?

Why not give the lesson to your school and see if your pupils tell the story as well as Louise has?

ALUM.

We had some alum.

We found it was alum by tasting it.

The alum was in lumps, but Miss Wehmhoff powdered it.

We put some of the alum in hot water.

The alum dissolved.

We had an alum solution.

We put alum in five times.

Some of the alum dissolved and some settled on the bottom.

We suspended a string in a bottle.

Then we poured the hot alum solution in the bottle.

We put it away so it would not be disturbed.

We worked with the blue stone the same way.

January 23.

ALUM CRYSTALS.

The alum crystals shine like diamonds, and they look like rock candy.

The alum crystals have very many pretty colors in them.

The alum crystal has very many corners and many edges and they are very sharp.

It has eight triangles.

We looked in the microscope and we saw that the alum crystal looked very much bigger than it did before Miss Wehmhoff put it under the microscope.

First the alum crystal was a lump of alum.

The alum crystal works very quickly and very quietly.

When we looked under the microscope we saw that the alum crystal looked like a point coming up.

The alum crystal has smooth faces.



It looked like this.

January 27.

LOUISE GAILLARD.

DESK WORK—ADAPTED ACROSTICS.

This device is very successful in giving a touch of variety to written language exercises.

The pupils become absorbed in weaving in the words whose initial letter will spell their acrostic, and forget they are writing sentences.

The purpose is not to make them skillful in writing acrostics, but to arouse that attention, that absorbing interest which makes them forget the deed in doing.

When the interest flags, where the pupils write the sentences because they must and not because they like to, then use the device no more. Its work is done.

The "adopted" acrostic may be made clear to the pupils, thus :

"Who can give me a sentence whose first word begins with t?"

Suppose the sentence given be :

1. The boys played ball.

"Now one whose first letter begins with o?"

2. Old horses can not work hard.

"Now one beginning with m?"

3. Mondamin was the Indian name for corn.

Point out that the initial letters in The, Old and Mondamin, spell T-O-M, and note the pupils pleased surprise.

To further illustrate, the teacher may write an acrostic :

D-o you know whose name I have chosen?

O-ra can guess it, I think.

R-oy can, too, perhaps.

A-ll can see it if they try hard.

"All who can see the name I chose, may write and show it to me." This will readily test how many see "Dora."

The teacher may continue: "Write three sentences whose initial letters spell Dan.

They will delight to make such acrostics, using the names of their classmates.

Encourage them to connect their sentences thus :

L-ucy invited four little girls to play with her.

A-lice brought her doll.

U-na brought her tea-set.

R-ose brought her pug.

A-nother little girl brought a picture book.

Do you see her name?

[Laura.]

The fact that December is the Christmas month may be utilized, by making acrostics telling of the presents the pupils would like. For example :

D-o you know what I would like for Christmas?

O-h I am sure you can guess.

L-et me help you find out.

L-ook at the letters that begin my sentence and you will see.

[Doll.]

For variety the initial letters in the last words may be used :

For Christmas a boy's papa gives him a d-rum.

His brother gave him an a-wl.

His cousin gave him a v-ise.

His mamma gave him some i-nk.

His baby sister gave him a toy desk.

What was the boy's name?

[David.]

Some may be able to make crude rhymes. Remember it is the *zest* in the work you desire. From the standpoint of earnest, interested effort, the following from a pupil, is a gem:

S-even little candles on a Christmas tree,

A-ll as bright as bright could be,

N-one were dim, I tell you true.

T-wo were red and three were blue,

And two were white as I or you.

[Santa.]

C-andles gay, on Christmas night,

L-ittle candles shining bright,

Are you glad to give such light

U-nto us, that we may see

S-uch nice presents on our tree?

[Claus.]

DEPARTMENT OF PEDAGOGY.

Conducted by ARNOLD TOMPKINS, Chair of Pedagogy, University of Illinois, at Champaign.

TWO CONCEPTS OF THE CONCEPT.

Perhaps the most general notion of the concept is that which regards it as the sum of common attributes. The individuals of a class are unified by the common attributes which thread through them. The objects, in this view, may have no real connection; they are connected in the mind only, and that because some element, or elements, of the experience in observing the different objects is the same. In this way, the concept becomes a kind of abstract, leaving the individual objects to take care of themselves. It is the unity of common attributes without differences.

A much higher form of unity and of the concept arises from considering a class of things as having their unity, not in the mere fact of common attributes, but as having their life and being in a common agent. The primary fact is not that of common attributes, but that which produces the common attributes. Every object came to be what it is through some creative energy, which energy may have produced many other things. These things are alike because they are the product of the same energy. The likenesses are serviceable in pointing to a unity of origin and indicating its nature. The individuals of a class have a real unity in and through their creative energy. The word concept literally means taken together; that is, the individuals are taken together through the force which makes them; or, the creative energy and the created individual are taken together. This creative energy is universal, for it can create individuals without limit. The idea or energy which creates one individual is capable of an infinite number of others. The rose idea or germ can never be exhausted so far as the number of specimens of its power is concerned. The concept, then, is the grasping together the individual and the universal.

This view of the concept does not make it stand apart from the individuals as does the view described above. The individual and the universal are held to be one; the individual is the universal, and the universal is the individual. The individual cannot exist except in manifesting the universal, and the universal appears only in individuals. To perceive an object is simply to

know its individual side; to conceive it is to know it as a universal. Since an object has but these two aspects, the mind can do nothing with it but perceive it or conceive it.

It is obvious that the second view of the concept is much more fundamental than the first. In it, the mind comes into the closest possible touch with the object, reaching its very life and origin. And, as might be expected, this view is also the simplest. Sometimes superficial thinking is permitted on the ground that pupils cannot comprehend the deeper truths. Generally this is a poor excuse, for the exact and proper notion is the most easily comprehended. It will require a month to teach the mechanical idea of the concept, and after that the pupil will be haunted with a perpetual mystery. But a few simple illustrations will make the true view clear.

The real test of a correct notion is its working value. By this test the deeper view has clearly the advantage. In the first place it prompts the teacher to develop the inner meaning of things, rather than to be satisfied with external and formal classifications. There are two great classes of scientists; one of which spend their time in making systems and classes by external marks and forms; while the other seeks the method of life working through genera and species. In fact the student of any subject belongs to one or the other of these classes. The teacher of grammar may be satisfied with merely formal classifications. If possessed by the deeper notion of the concept, the teacher of grammar would lead the pupil to watch the creative energy as it determines and manifests itself in the manifold language forms. Two forms of expression must have different energies lying back of them. These forms can not be classified with profit without discerning the difference generating the forms. The mental state which creates a clause is not the same as that which creates a phrase; and so the noun and the pronoun are divergent forms of the energy which creates substantives in general. And thus, in whatever subject, the teacher who has the true notion of concept will hold the pupil close to the living energy of the subject; that is, will really teach it. I believe it is no exaggeration to say that the difference between teachers is determined largely by the difference in their conceptions of the concept. When we know the character of the teacher's concept of the thing he is to teach we may be fairly sure of the character of his teaching. The true

notion of the concept is the key to the logical method of the subject, which is the basis of all method in teaching.

The notion of the concept as a creative energy manifesting itself in individuals is not only the key to the logical method of the subject, but also to training to appreciate the beautiful. The pupil feels the joy of the beautiful when he perceives that the creative energy has fully manifested itself in the individual. The beautiful is such free manifestation of the inner principle of the object. The teacher properly indoctrinated with the concept causes the pupil to watch continually for the manifestation of the living energy of things ; who must continually pronounce the verdict of beautiful or ugly accordingly as the energy is freed or hampered in the object studied. This is the only royal road to discipline to a higher sense of the beautiful.

While the fundamental notion of the concept is the key to truth and beauty it is also the key to the good. The good is a striving to self-realization ; and this fact is the very life of the concept. Things are virtuous in their strivings ; they are good when they fill their appointed end. To form a concept is to search for the potencies in things, and thus to determine what things ought to be. Classifying is not merely collecting together by common attributes, but exploring for the ideal, the possible which is hinted at by the imperfect individuals. Logically a concept reveals what a thing really is ; but no sooner is this discerned than there appears what it ought to be. When it happens that a thing is what it ought to be it is beautiful. The true notion of the concept is thus the key to all three methods and phases of thought in learning any subject.

But the half has not been told. The problem of all thought is the unity of the objective world. In whatever field the scientist labors he is trying to reduce the manifold diversity to system and unity. By finding the common attributes of objects, as required by the first kind of concept, the thinker does not reach objective unity, but only a subjective unity, in the common impression made by like attributes. The attributes themselves are not seen to have any inherent connection ; they are thought only to be the same. They are unified in thought, in that each is responded to by the same mental activity. This kind of concept is really at the basis of nominalism ; the doctrine which declares that there is no objective reality corresponding to common nouns.

Words name directly what is in the mind, and indirectly what is in the objective world. Of course there is not always an objective reality corresponding to one's conception. One can conceive a centaur and name it; but the name does not correspond to any objective reality independent of the thinking. The lower order of the concept and nominalism agree in holding that the name and the subjective state of mind are the only realities involved; the objective reality of the universal, and through this, the objective reality of the world is denied.

If there is order and system and unity in the objective world it must be in and through some real universal principle, which is even more real than the individuals which spring from it, and in which the individuals have their unity. It may fairly be expected that the teacher who thinks in the shallow form of the concept will leave the world a distracted jumble in the minds of the pupils. Whether they know it or not, all people and all teachers are either nominalists or realists, and by their fruits they may be known. Once more let it be observed that the quality of the teacher's work is fundamentally determined by his attitude towards the concept. The teacher who holds that all things arise from a creative energy, which is more real than the created individuals, will bring the pupil into a conception of the subject matter as a living integrated whole; as something that throbs with life and energy rather than being an aggregation of isolated fragments merely held together by subjective forms of thought. The one results in a materialistic conception of the world, the other in a spiritualistic and theistic one.

But of more direct educational significance is the fact that the pupil's life can only be reached by causing him to conceive the world as living unity. As the immediate problem of all thought is the objective unity of the universe, the immediate motive of all thinking and of all education is the unity of the thinker with his other self which lies beyond him in the world which he thinks. The great question of method therefore is, what is the point of touch between the pupil and the world which he thinks. It can not be found in the senses and the attributes of the object which impress them. It can not therefore be found in the common attributes which are employed in ordinary classification. Such attributes can neither unify the objective world nor the subjective with the objective. Nothing which does not unify the

objective world can ever unify the subjective with the objective. The problem of unifying the subjective with the objective, as the process of education requires, resolves itself always into the problem of unifying the objective. Self-active, creative energy is the only unifying principle of the objective world ; and, since the individual to be educated is such an energy, this is the point of identity between him and the world he thinks. The pupil can not be quickened without touching the quickening point in the object ; he can not be regenerated without moving in the generative process of the object he thinks.

CHRISTMAS PROGRAM.

“Peace on earth, good will to men.”

[Make the school room as attractive as possible at this festival of the Christmas tide. Evergreens will be gladly brought by the children, and there are no more beautiful decorations than green wreaths. The scarlet berries of bitter-sweet and holly are quite common and can be used very effectually. Make each child a helper and you will be sure of good results.]

FOR THE BLACKBOARD :—

“The happy Christmas comes once more.
The Heavenly Guest is at the door,
The blessed words, the shepherds’ thrill,
The joyous tidings, “Peace, good will.”
“There’s Christmas music everywhere,
The Christmas bells are ringing.
The very air is full of joy,
The Christmas tidings bringing.”

- I. SONG..... America.
- 2. RECITATION..... A Christmas Eve Thought.

If Santa Claus should stumble,
As he climbs the chimney tall
With all this ice upon it,
I’m afraid he’d get a fall
And smash himself to pieces—
To say nothing of the toys !
Dear me, what sorrow that would bring
To all the girls and boys !
So I’m going to write a note
And pin it to the gate—
I’ll write it large, so ne can see,
No matter if it’s late—

And say, "Dear Santa Claus, don't try
To climb the roof to-night,
But walk right in, the door's unlocked,
The nursery's on the right."

—By Harriet Beecher Sterling in *St Nicholas*.

CHRISTMAS CUSTOMS IN DIFFERENT PARTS OF THE UNITED STATES :—

3. In the northern states on Christmas, parties are given, and it is the aim of every family to gather together all of its members, young and old, no matter how widely they may be scattered, and have them all sit down at once to the Christmas dinner. A family tree for Christmas is a feature of this section, a custom which owes its origin to the German immigrants, and was kept alive by their descendants, until it has become thoroughly American.

4. In the southern states, the sports attendant upon snow and ice are necessarily absent, but their place is taken by a turkey-shoot or opossum hunt. For dinner the sugar-cured ham always finds a place at the opposite end of the table from the turkey, and cakes are in great favor, especially fruit and pound cakes. These latter are served in the evening with a glass of egg nogg. Mistletoe and the delicate wax plants are used for ornamenting the table. On Christmas night a ball is generally given, which everybody in the house is expected to attend. In Kentucky and Tennessee a roast pig is a favorite Christmas dish, and mince pie is on every table as it is in the north and east.

5. Christmas is a royal holiday in California and on the Pacific slope generally, although the famous festival happens at the worst time in the year, the middle of the rainy season. Christmas week is usually signalized by a steady downpour, but Santa Claus is just as merry here as anywhere else. Game of every sort abounds, and the fruits of every zone. Fresh peaches, pears, plums, grapes and oranges figure on the California Christmas table, and there is no trouble to get evergreens, since even the grass is green.

6. In the southern territories, like Arizona and New Mexico, Christmas is observed without turkey, mince pies or a Christmas tree, and partakes of a Spanish character. There is no interchange of presents; that custom is reserved for New Year's Day.

7. All over this great country, however, the custom of Christmas observance is approaching a similarity like the keeping of Independence day and the time is not far distant when the dissimilarities we have pointed out will have ceased to exist. Those due to difference of climate will, of course, continue, but as we become more and more one people, we will every year approach nearer to a Christmas that shall be known as distinctively American.—*Golden Days*.

8. RECITATION.....What December Says.

Open your hearts ere I am gone,
 And hear my old, old story;
 For I am the month that first looked down
 On that beautiful Babe of Glory.
 You never must call me lone and drear
 Because no birds are singing;
 Open your hearts and you shall hear
 The song of the angels ringing.

Open you hearts and hear the feet
 Of the star-led Wise Men, olden;
 Bring out *your* treasures of incense sweet;
 Lay down *your* offerings golden.

You say you look, but see no sight
 Of the wonderful Babe I'm telling;
 You say they have carried him off, by night,
 From Bethlehem's lowly dwelling.

Open your hearts and seek the door
 Where the alway poor are staying;
 For this is the story, for evermore
 The Master's voice is saying :
 Inasmuch as ye do it unto them,
 The poor, the weak and the stranger,
 Ye do it to Jesus of Bethlehem—
 Dear Babe of the star-lit manger !

9. READING.....The Christmas Lesson.

There were four of them. Beth, and Dick, and Mary and the cat. Beth was five, Dick was going on four, Mary was two, though she did not sleep in the big old cradle yet, and the cat—well, it's no matter how old the cat was. She didn't say anything only "Purr—r, purr—r—r."

Not often did the little people take their go-to-bed lunch before the dining-room fire. This was a special night.

"The happy night
 That to the cottage as the crown,
 Brought tidings of salvation down."

It was fun to sit in their "nighties" and toast their little feet.

Mamma had just told them about the first Christmas Gift, the babe of Bethlehem, how He was given to us, and how, through His life and death, He gave himself to others. Then, because mammas cannot begin too soon to talk about such things, she said :

Couldn't my dears think of some present for our washer-woman's children? Santa Claus will doubtless bring you more toys to-morrow. You could give away some you have now as well as not. Try to think what these others would like."

With that she was called out for a moment.

Well, it was a poser. Beth tried to think, but, of course, Dick, being a boy, put in first.

"Le's div'em kitty," he said, as plain as he could, with his mouth full.

Kitty whisked her tail as if she didn't much like it. Beth shook her curls, and said, between two bites:

"Why, Dick Johnson, I'm s'prised at you! Kitty's one of the fam'bly. Might's well give away the baby!"

"Dat's just what Dodd did do, anyway," said the young logician.

That was like Dick, and Beth didn't know what to say. Mamma came back in the nick of time. When the question was put to her, for some reason or other she gave Dick a squeeze, and said, "Bless his little heart!"

But she told them they needn't send the cat, she was pretty sure the washer-woman's children had a cat already.

Helped by her suggestions, Beth decided on one of her pretty dolls. Dick gave a bow and arrows. Even baby Mary, when asked if her dancing Jack could go, said "Eth," as if she understood.

Then the children went to bed happy, because they were going to make somebody else happy.

It was a very nice lesson to learn.

—Helen A. Hawley, in *Our Little Men and Women*.

10. ESSAY.....The Story of the Christ-Child.

11. RECITATION.....Santa Claus's Mistake.

We hung up our stockings together,
My brother Joe and I;
I hung mine in the chimney corner,
And Joe hung his close by.

But when we got up in the morning,
Joe found, to his surprise,
That his stocking held a large wax doll
With curls and sweet brown eyes.

A set of nice china tea dishes
And silver thimble too.
Joe said: "Well this is the strangest thing!
Santa must think I'm you."

The gifts I found in my stocking
Were all things for a boy.
A drum, a trumpet, a chest of tools,
And a steam engine toy.

We thought it was very strange indeed,
My brother Joe and I;
And we could not quite make up our minds
Whether to laugh or cry.

But mamma said we'd better exchange
 And Santa would not mind,
 She said he was getting very old
 And just a little blind.

Then papa said, "I made a mistake."
 And mamma said, "Hush! dear."
 But papa said, "I turned off the gas;
 I'll leave it on next year."

But, next time we hang up our stockings,
 I'll put our names to show
 Which of the stockings belong to me,
 And which to brother Joe.

—Lizzie Wills.

12. RECITATION While Shepherds Watched.

Like small curled feathers, white and soft,
 The little clouds went by,
 Across the moon, and past the stars,
 And down the western sky;
 In upland pastures, where the grass
 With frosted dew was white,
 Like snowy clouds the young sheep lay,
 That first, best Christmas night.

The shepherds slept; and glimmering faint,
 With twist of thin blue smoke,
 Only their fire's crackling flames
 The tender silence broke—
 Save when a young lamb raised his head,
 Or, when the night wind blew,
 A nesting bird would softly stir,
 Where dusky olives grew.

With finger on her solemn lip,
 Night hushed the shadowy earth,
 And only stars and angels saw
 The little Savior's birth;
 Then came such flash of silver light
 Across the bending skies,
 The wondering shepherds woke and hid
 Their frightened, dazzled eyes!

And all their gentle, sleepy flock
 Looked up, then slept again,
 Nor knew the light that dimmed the stars
 Brought endless Peace to men.
 Nor even heard the gracious words
 That down the ages ring—
 "The Christ is born! the Lord has come
 Good-will on earth to bring."

Then o'er the moonlit, misty fields,
 Dumb with the world's great joy,
 The shepherds sought the white-walled town,
 Where lay the baby boy.
 And oh, the gladness of the world,
 The glory of the skies,
 Because the longed-for Christ looked up
 In Mary's happy eyes.

—Margaret Deland.

13. SONG.....O, Little Town of Bethlehem.

(We have had several inquiries for the Christmas play, published in the December JOURNAL of last year. We still have a few copies we can furnish if needed).

EDITORIAL.

CHRISTMAS.

The Christmas chimes are pealing, softly pealing ; the joyous sounds are ringing, ever louder and clearer, ever nearer and nearer, like a sweet-toned benediction falling on the ear. Glad ringers are pulling the ropes, and in one grand swell of melody Christmas, with its old yet ever new and marvelous mysteries, bursts triumphantly upon the world once more.

The cattle have turned their heads to the east and knelt down to worship the king cradled in the manger ; the houses are decorated with holly ; the yule-log burns brightly ; the gray shadows sweep away ; the sun is up and the bright-eyed children, who have lain awake all night listening for the patter of old Saint Nick's tiny steeds on the roof, only to fall asleep at the eventful moment, wake hurriedly to find the stockings running over with toys and sweetmeats.

Beautiful and right is it that gifts and good wishes should fill the air like snowflakes at Christmas tide. And beautiful is the year in its coming and its going—most beautiful and blessed because it is always the *Year of Our Lord*.—Washington Irving.

THE BROOKLYN RETIREMENT FUND.

BROOKLYN, N. Y.—The retirement fund for school teachers in this city consists of one per cent. deduction from the salaries of all teachers appointed subsequent to January 1, 1896, and a similar deduction in the case of teachers who, prior to January 1, 1896, elected to come within the provisions of Chapter 656, Laws of 1895, which authorized the establishment of a retirement fund for teachers.

Teachers at time of retirement must be sixty years old in the case of males, and fifty-five in the case of females. They shall have had thirty years experience, of which twenty years shall have been consecutive service in Brooklyn public schools immediately preceding retirement. Teachers,

before retirement, are required to pay into the fund twenty per centum of their annual salaries. This may be paid in lump sum. Teachers may be retired on personal application or upon recommendation of the local committee of the school in which they are employed, provided such application or recommendation receives the approval of the committee on retirement of teachers, and board of education.

Annuitants shall receive half pay, but no person shall receive more than \$1,200 per annum.

Ten public school teachers have been retired under the Teacher's Retirement Fund Law; their pensions ranging from \$325 to \$1,100 a year. The fund now amounts to \$9,000.—*N. Y. School Journal*.

SINCE the last issue of the JOURNAL an election has taken place and everybody knows the result. David M. Geeting, the present incumbent, was re-elected to the office of superintendent of public instruction. Mr. Geeting is so well and so favorably known to the teachers of Indiana that no extended notice is necessary. Having served as deputy for four years under Mr. LaFollette, he entered upon the duties of his office specially prepared for the work. Since he has been in office, he has worked indefatigably and is making one of the best superintendents that ever held the position. Mr. Geeting will retain his present corps of able and obliging assistants and the people who have business with his office can rest assured that they will receive courteous treatment.

W. B. Sinclair, Mr. Geeting's opponent in the campaign, is now hard at work as superintendent of the Starke county schools, a position he has filled with credit for nearly twelve years. Mr. Sinclair made a thorough canvass and was everywhere kindly received and courteously treated, and during his canvass did not utter a word or do an act that could justly be criticised. He highly appreciates the kindness with which he was uniformly received. The acquaintances he made during the campaign will be remembered for years to come. Mr. Geeting and Mr. Sinclair were good friends when the campaign opened and they are good friends to-day.

PLEASE REMEMBER.—Will each unpaid subscriber please remember that his subscription was taken with the distinct understanding that the money should be paid *before* January 1, 1897. Many subscribed with the understanding that they were to pay at the county association the last of November. Teachers, above all others, should hold their promises sacred. Let every one pay "according to contract" or give a good reason for his failure. Pay the agent or send direct to the editor, the result will be the same.

THE STATE BOARD OF HEALTH has issued a long list of rules in regard to preserving the health of school children. Every possible precaution is taken to prevent the spread of contagious diseases. Some of the rules may seem unnecessary, but experience and careful observation have demonstrated the necessity of every rule given. For a copy of the rules, address the secretary of the Board, Dr. J. N. Hurty, Indianapolis.

WITH this issue closes the Forty-first volume of the INDIANA SCHOOL JOURNAL. This is the largest volume [nearly 900 pages of reading matter] ever issued, and the uniform testimony is that it is *the best*. The present editor has been at the helm for more than twenty-five years and has endeavored to keep at all times in the current of the best educational thought. No educational paper employs an abler corps of regular contributors, and therefore it always presents to its readers the results of the latest and best there is going in the school world. The JOURNAL will continue to devote itself faithfully to the best interests of Indiana teachers.

A CURFEW LAW is very much needed and every teacher in the state should work for it. The work should be done with the senators and representatives before they come to Indianapolis. For the benefit of those not familiar with the term, "Curfew Law," we will say that this is an old English name applied to a law that requires all children under sixteen years of age to be at home after nine o'clock at night, unless accompanied by a parent or guardian. Such a law would be the means of saving to good society, thousands of boys and girls.

THE program for the State Teachers' Association, found on another page, speaks for itself. This meeting ought to enroll *one thousand* members instead of about half that number, as is usually the case. Last year, both the northern and southern associations were larger than the state meeting. This ought not so to be. For any information not found in the program please write to the chairman of the executive committee. W. A. Hester, Evansville.

THE EDITOR wishes to call attention particularly to Prof. Dennis's natural science article found on another page. How many JOURNAL readers will make use of the article and would like to have some more along the same line? Please read this article and also one in the same line in the November issue, and drop the editor a card.

ESPECIAL attention is called to the extensive and suggestive comments given this month on the Township Institute work. What is said on grammar and history will be profitable reading for persons not interested in the township work. The "literary interpretations" also has an interest independent of this work.

THE several counties interested in the "premiums" offered by the JOURNAL for the largest number of subscribers, will please remember the conditions. The premiums go to the counties sending the largest per cent. of their teachers as *paid* subscribers, and the payment must be made on or before Jan. 1, 1897.

TO ACCOMMODATE the teachers in a few counties that held preliminary institutes, and thus got a month ahead, we publish the outlines for township institutes for *two months* in this issue. This will make them in time for all.

AN EXCELLENT article on the Reading Circles, setting forth their purpose and their work, by F. A. Cotton, deputy state superintendent, recently appeared in *The Indianapolis Sentinel*. The JOURNAL regrets that it can not make room for it this month.

IN SENDING pay for the JOURNAL, either register the letter or send postal money order. Money sent in an ordinary letter is at the risk of the sender.

THE "Food for Thought" has been crowded out this time but will appear next month.

QUESTIONS AND ANSWERS.

STATE BOARD QUESTIONS USED IN OCTOBER.

SPECIAL NOTICE.—For six months beginning with November the questions in the Science of Education will be based on the following :

For November, 1896, not confined to any particular text.

For December, 1896, on McMurry's General Method.

For January, 1897, on McMurry's General Method.

For February, 1897, on McMurry's General Method.

For March, 1897, on McMurry's and DeGarmo.

For April, 1897, not confined to any particular text.

For the same examinations, the questions in "general culture" will be based on Guizot's History of Civilization, covering one of the Township Institute outlines at each examination. See order of State Board of Education, May 14, 1896.

PHYSIOLOGY.—1. Define physiology.

2. Describe the sweat-glands and explain their functions.

3. What is the function of the tympanic membrane.

4. What is the function of the sclerotic coat?

5. How is the sense of smell produced?

6. What is paralysis and how is it caused?

7. What is the objection to alcoholic drinks?

8. The poison of snake bites has a depressing effect on the nervous system. What is the advantage or disadvantage under these circumstances to administer large doses of whisky in case of snake bites? (Any five.)

READING.—1. Why is the process of teaching the *new words* in the primary grades so important? Why not so important in the higher grades? 10

2. Define *preparation*, *presentation* and *application*. Show how a knowledge of these terms will help the teacher in her reading work. 10

3. "To read in the fullest way is to construct pictures as vividly as the author did; see clearly all the truths he embodied in the selection; in short, the reader must live what the author lived in the production."

Show that this is true.

10

4. Discuss the reading work in the State Course of Study.

5. To what extent can the reading work of the seventh year be devoted to the study of literature? 10

6. Read a selection to the County Superintendent. 50

ALCOHOL AND NARCOTICS.—1. Why is it that in certain diseased conditions of the system alcoholic stimulants may be prescribed by a physician with great benefit, while the same person in health can not use these stimulants with any safety?

2. How can strong drink become a cause of insanity?

3. How does the effect of the continued use of alcohol upon the coats of the blood vessels tend to produce serious diseases of the kidneys and the liver?

4. The use of tobacco has caused many cases of virulent "delirium tremens;" how can you account for this?

5. What are the evil effects of narcotics upon the respiratory system?

THE TEMPEST.—1. Who is Ferdinand? What does Prospero mean by saying of Ferdinand and Miranda, "They are both in either's power"?

2. What reason does Prospero give for opposing the union of his daughter with Ferdinand?

3. At one stage of the drama Antonio, who had been aided by Alonzo in seizing Prospero's dukedom, urges Sebastian to murder Alonzo. What insight into Antonio's character does this give?

4. Ariel awakens Alonzo at the moment he is about to be murdered. Does this event throw any light on the question as to what the poet means by Ariel?

5. Compare and contrast Caliban, Trinculo and Stephano?

HISTORY.—Discuss the subject of History under the following heads:

1. As a culture study.

2. As a study for the development of character.

3. As related to other subjects.

4. As an aid to teaching morals.

5. Compared with other common branches as tending to give mental training.

ARITHMETIC.—1. What distinction do you make between solving a problem by rule and by principle? Which is preferable and why?

2. When the result of two factors and one of them are known, how find the other? Illustrate. Show how this principle is used in proportion, in square root.

3. What is commercial discount? Of what advantage is it in business? How computed?

4. A merchant bought a bill of goods for \$1,000.00, with 10, 5 and 5 off for cash. He offered \$800.00 net cash for the goods, which was accepted. Who, if either, was the loser, the buyer or the seller? How much?

5. A boy invested \$25.00 in calves at \$5.00 each. Develop this work as to a pupil beginning this form of division.

6. Find the cost of a carpet $\frac{3}{4}$ yd. wide, at \$1.50 per yard, for a room 17 ft. long and $14\frac{1}{2}$ ft. wide, there being a waste of one yard in matching the pattern, you being instructed to lay the carpet in the most economical way.

7. What rate of premium does 7% stock bear in market when an investment pays 6%.

8. A piece of property sold for \$11,320.00; the terms were \$3,200.00 cash, \$3,500.00 in six months, \$2,500.00 in ten months, and the remainder in one year and three months with 7% interest. What was the whole amount paid?

9. At what rate should a three months' note be discounted to produce 8% interest?

SCIENCE OF EDUCATION.—1. What is the general relation of the intellect, the feelings and the will?

2. Define the will.

3. To what extent does good moral character depend on strength and decisiveness of will? Show that your answer is true.

4. A man finds a sum of money and later discovers to whom it belongs. His desire to retain the money is stronger than his desire to preserve his integrity. Under these conditions, will he decide to retain the money? Give reasons for your answer.

5. Is the strength of the desire determined in any degree by the will itself? Explain your view fully.

6. Does the desire impel or compel the will?

7. What is meant by inner freedom?

8. What is meant by transcendental freedom of the will? Does the child possess this freedom? *(Any five.)*

GRAMMAR.—1. An accomplished American, much known and much esteemed in this country, the late Mr. Charles Sumner, says that what particularly struck him in England was the large class of gentlemen as distinct from the nobility, and the abundance amongst them of serious knowledge, high accomplishment and refined taste—taste fastidious, perhaps, says Mr. Sumner, to excess, but erring on virtue's side.

1. Classify the above sentence as to use and form.

2. Select the principal clause and give its entire subject and predicate.

3. Select the first two subordinate clauses and state how they are used.

4. Select the participles in the sentence and state how each is used.

5. Select the appositives and state how they are used.

6. (a) Distinguish between co-ordinate and subordinate conjunctions. Illustrate in sentences.

(b) Distinguish between copulative and disjunctive conjunctions. Illustrate in sentences.

GEOGRAPHY.—1. Dr. Brooks classifies the methods of studying Geography under four heads: Analytic, Synthetic, Inductive and Deductive; which do you regard as best? Why?

2. What influences have the geographical conditions of the Mississippi Valley had upon the marvelous growth of the states and cities bordering upon it?

3. To what extent would you use, or permit to be used, the questions in the text book on Geography? Why?

4. Does the inclination of the earth's axis towards the sun ever vary? Does its inclination towards the north pole ever vary?

5. What is the U. S. system of land surveying?

6. Name three industrial occupations for which the New England States are peculiarly fitted.

9. What part of the territory of the U. S. was formerly known as "No man's Land?" To what organized territory does it now belong?

8. What geographical reasons make the Monroe doctrine a necessity for the U. S.? (Any seven.)

ANSWERS TO PRECEDING QUESTIONS.

ARITHMETIC.—1. Working a problem by rule is simply a mechanical process, the *reasons* for the different steps not necessarily entering into it. It is essential that the teacher first apply the principles that are connected with the different elements of the problem; he may then lead the pupils to form the rule—this being simply a process of generalization. But in every solution, the pupil should be required to state the principle involved until he is master of it.

2. By knowing the product of the means, you know the product of the extremes; hence, if one extreme [or mean] is given, the other can be found by dividing this product by the given term. A square number is the product of two equal factors; hence, if one is known, both are known.

3. By some authorities, commercial discount is a deduction made from the face of bills, from the list price of goods, or from the amount of a debt, without regard to time, and is usually expressed by the term, "*per cent. off.*" It is sometimes called *trade discount*. Such discounts are made to avoid the necessity of changing list or catalogue prices, when the market price changes; the list price remains the same, and the discounts are changed to meet the rise and fall in prices. A per cent. off is sometimes offered to tempt the buyer to pay cash and cash transactions are considered highly advantageous to both parties concerned. [English arithmetics call bank discount, commercial discount.]

4. Answer, the seller lost \$12.25.

5. Let "counters" of some kind represent dollars, and have the pupil separate them into groups of five; he can then be led to see that each group represents the number of dollars it takes to buy one calf, and the number of groups will be the number of calves that the \$25 will purchase.

6. $4\frac{1}{2} + \frac{3}{4} = 7\frac{1}{4}$; hence, 8 strips if laid the *short* way; [8 times $4\frac{1}{2}$ yds.] + 1 yd. = $39\frac{1}{2}$ yds.

$5\frac{1}{2} + \frac{3}{4} = 6\frac{1}{4}$; hence, 7 strips if laid the *long* way; [7 times $5\frac{1}{2}$ yds.] + 1 yd. = $40\frac{1}{2}$ yds.

Laying the strips the short way will be the least expensive; $39\frac{1}{2}$ yds. @ \$1.50 = \$59.50.

7. Each share of \$100 yields annually \$7, which is 6% of what was paid for a share; the problem then becomes—\$7 is 6% of what sum of money? $7 \div .06 = 116\frac{2}{3}$; hence, the sum is $\$116\frac{2}{3}$; the price paid for a share of \$100. Therefore, the premium is $16\frac{2}{3}\%$.

8. Cash	\$ 3,200.00
Amount of \$3,500, at 7%, for 6 mo	3,622.50
Amount of \$2,500, at 7%, for 10 mo	2,645.83 $\frac{1}{2}$
Amount of \$2,120, at 7%, for 15 mo	2,305.50
Answer.....	\$11,773.83 $\frac{1}{2}$

9. By *bank* discount:—Let \$100 = proceeds; then the amount of this at 8% for 93 days = \$102 $\frac{1}{8}$, face of note. If the banker gives \$100 proceeds, and in 93 days receives \$102 $\frac{1}{8}$, he makes 8% interest, direct, on the money invested.

Now the problem is,—what rate of discount (*bank*) will give \$100 as proceeds from a face of \$102 $\frac{1}{8}$, the time being 93 days?

The bank discount (or interest) is \$2 $\frac{1}{8}$; the time is 93 days; the principal (face of note) is \$102 $\frac{1}{8}$.

Principal \times Rate \times Time = Interest;

\$102 $\frac{1}{8}$ \times Rate \times $\frac{93}{360}$ = \$2 $\frac{1}{8}$.

Rate = $2\frac{1}{8} \div (102\frac{1}{8} \times \frac{93}{360}) = .071\frac{283}{31}$, answer.

(See Ray's Higher Arithmetic for similar examples, solved by bank discount).

9. By *trade* discount?—Let \$100 = proceeds; then the amount of this at 8% for 90 days = \$102, face of note. If the bill broker gives \$100, and in 90 days receives \$102, he makes 8% interest, direct, on the money invested.

Now the problem is,—what rate of discount (*trade*) will give \$100 as proceeds from a face of \$102, *time not being considered*?

$102 - 100 = 2$; $2 \div 102 = .01\frac{1}{51}$, answer.

(See Lock's Arithmetic for similar examples, solved by trade discount).

HISTORY.—1. History brings to the mind of man broad views and great principles, the great causes which have been and are at work among the nations, and the tendencies now existing among the peoples of the earth. These ideas improve mankind by exhibiting to him his environment in all its varied activities, and give him culture by enlarging his thought, feeling, and purpose.

2. No other study can so strongly impress the student with eternal truth existing in the maxim of life—"As a man sows, so shall he reap;" or with the certainty of the punishment that awaits dishonesty, avarice, selfishness, etc.; or with certainty of the reward that awaits virtue, honesty, generosity, etc. A reflective mind considering these things tends to choose the right, and in this tendency to choose voluntarily the right course, lies the germ of character development.

3. History is very closely related to geography and literature. History is the record of the life of a people. This life has been largely directed and influenced by man's environment, much of which is his *geography*; and this life is revealed in all its struggles and emotions by the *literature* of the people.

4. In the progress of men and nations it can be clearly set forth that right in the end prevails; and the force of example is so strong with young people, that the use in our schools of the biographies of great men is one of

the best possible means of inculcating right actions and thoughts among the pupils.

"History deals with the actions of mankind; and these actions contain a moral element. We see the motives which inspire and the results which flow from these actions. We see the consecrated labors of the good, the devotion of the patriot, the fortitude of the martyrs, and our souls in admiration are lifted up into a higher plane of moral feeling. We see the meanness of the ignoble, the craft and falsehood of the unprincipled, the corruptions of the base and degraded; and the soul turns instinctively away from the low and vicious to the pure and virtuous. We long to emulate the deeds of heroes and patriots, and thus a desire for good and noble actions is excited in the mind. For moral culture, a boy should go to history rather than to moral philosophy."

5. The study of history gives special culture to the memory, to the imagination, and to probable reasoning. No other branch, considered alone, gives mental training equal to that given by history, because of the intense interest excited in the mind, in following the career of man in his struggles for freedom.

PHYSIOLOGY.—1. Physiology treats of the functions, processes, and properties of the various parts of the body.

2. [See pages 191, 192, of Adv. Phys.] The sweat glands select the excrementitious matter that is conveyed through the ducts to the surface of the body.

3. [See page 279]. The tympanic membrane is easily thrown into vibration by the atmospheric waves; this membrane receives the waves of sound, and being thrown into vibration, it gives the chain of bones the same movement.

4. The sclerotic coat protects the eye and gives it form by its hardness and serves as an attachment for the ocular muscles.

5. [See page 255.]

6. [See page 238.]

7. [See page 290, 291.]

8. The old theory of the advantage that dosing the victim of a snake bite with whisky would give, is that "one poison will kill another." Administering the whisky in large doses counteracted the effect of the bite, by putting into the blood a substance that neutralized the poison of the snake, and also stimulated the system so that it could resist the nervous depression caused by the bite.

GRAMMAR.—1. According to use, the sentence is *declarative*; according to form, it is *complex*.

2. The principal clause is—"An accomplished American, much known and esteemed in this country, the late Mr. Charles Sumner, says." Its entire subject is—"An accomplished American, much known and esteemed in this country, the late Mr. Charles Sumner." Its entire, simple predicate is "says."

3. ["What" is equivalent to *that which*, and these two words are in different clauses.] The *first* subordinate clause is "that (*that*) was the large class of gentlemen as distinct from the nobility, and the abundance amongst

them of serious knowledge, high accomplishment and refined taste—." The *second* subordinate clause is "(*which*) particularly struck him in England." It is used adjectively, modifying *that* in the first subordinate clause. These two clauses, together with the remainder of the sentence (a third clause modifying "taste") constitute the complex objective modifier of "says," the predicate of the principal clause.

4. "*Known*" and "*esteemed*" are past passive participles used as adjective modifiers of "*American*;" "*erring*" is a present participle used as an adjective modifier of "*taste*."

5. The expression, "*the late Mr. Charles Sumner*" is an appositive modifier of "*American*;" the expression, "*taste fastidious, perhaps, to excess, but erring on virtue's side,*" is an appositive modifier of "*taste*."

6. [1] A *co-ordinate* conjunction is a conjunction which is used to join elements of *equal* rank; as, [a] He, who works *and* waits, wins. [b] Study serves for delight, for ornament *and* for ability. [c] A king must win, *or* he must forfeit his crown forever.

[2.] A *subordinate* conjunction is a conjunction which is used to join elements of *unequal* rank; as, [a] Every man is a volume *if* you know how to read him. [b] We eat *that* we may live.

[3.] A *copulative* conjunction is one that joins on something additional and of related meaning; the connective most used in such cases is *and*; as, "The rains descended *and* the winds blew." See also [1] [a] above.

[4.] A *disjunctive* [or *adversative*] conjunction is one which joins on something in *contrast* or in *opposition* with what precedes it; the connective chiefly used in such sentences is *but*; as, "Talent is something *but* tact is everything." "Brutus loved Cæsar much, *but* he loved Rome more."

SCIENCE OF EDUCATION.—1. "According to psychology, there are three distinct activities of the mind, knowing, feeling and willing. These three powers are related to one another on a basis of equality, and yet the will should become the *monarch of the mind*. It is expected that all the other activities of the mind will be brought into subjection to the will." [See McMurry, page 205; also any good treatise on psychology.]

2. The will is that power of mind which chooses, decides and controls action. Sully says, "Thus, it is feeling that ultimately supplies the stimulus or force to volition, and intellect which guides or illumines it." [McMurry, pages 205 to 210 inclusive.]

3. "Will effort, to be valuable, must have its roots in those moral convictions which it is the chief aim of the school to foster and strengthen * * We were always forced to the conclusion that education aims at the will, and more particularly at the will as influenced and guided by moral ideas." [McMurry, pages 212, 213.]

4. Under the given conditions, and no others, there is no doubt whatever as to what his decision would be, if he could be positively assured that his guilt would never be discovered. He would retain the money. But if there enters into the consideration, the possibility of discovery, and the consequences of it, these elements would, in all ordinary cases, deter him from retaining the money.

5. Spiritually, as well as concretely, we naturally tend to approach that to which our attention is directed, or on which it is centered. If we permit, through lack of exercise of the will, an unholy desire to possess us, if the mind gives it entrance, it becomes rooted and is difficult to unlodge and banish. But if in the early stages of the workings of the desires, the will is brought to bear with special force, the desire is easily dispersed. Hence, the strength of the desire may be affected by the action or non-action of the will.

6. The desire may be so strong and the fruits so valuable, as to *impel* the will to bring about all the exertion necessary to the attainment of the desire. We may have a certain desire and its attainment may be very difficult, but very necessary; here the will is compelled to arrest itself in the commanding and directing of the activities that must overcome the difficulties that lie in the way of the attainment of the desire.

7. By *inner freedom* is meant "the obedience of the will to the highest moral incentive; it is the ability to set the will free from all selfish or wrong desires and to yield implicit obedience to moral ideas."

"I call that mind free which masters the senses, which protects itself against animal appetites, which contemns pleasure and pain in comparison with its own energy, which penetrates beneath the body, and recognizes its own reality and greatness, which passes life, not in asking what it shall eat or drink, but in hungering, thirsting and seeking after righteousness."

8. Transcendental freedom of the will is the fundamental or fore-ordained freedom as distinguished from acquired freedom of the will, through experience. It forms the basis of active existence, is the spiritual vitality of man himself, and every human being possesses it.

GEOGRAPHY.—1. The best "method" is the inductive one because it is in harmony with the way the mind acts in its efforts in acquisition. It corresponds with the primary law of mental development, from the particular to the general. The mind naturally learns facts before it learns to classify them into general systems.

2. The influences that have come from its enjoyable climate, the great fertility of its soil, the unsurpassed extent and variety of its productions, and the number and extent of its navigable water courses.

3. The extent to which the "questions" in the text-book should be used depends altogether on their nature and bearing upon the ultimate purpose in view. If they are arranged logically, and through them a broad common purpose runs, leading on to higher and broader aims—the "questions" should be used. If they are simply map, puzzle and other questions unrelated to any central idea, then they should not be used.

4. The inclination of the earth's axis towards the sun [or, rather, towards the plane of the ecliptic] varies slightly between fixed limits. The point at which the axis of the earth would pierce the celestial sphere makes a certain circuit of the heavens, which would be correctly indicated by a wavy line; this imaginary wavy line is caused by the precession of the equinoxes, and by a wobbling motion of the earth, which destroys the constancy of the angle which the axis of the earth makes with the plane of the

ecliptic. Wherever the axis of the earth points is the north pole of the celestial sphere. The axis of the earth has no inclination towards the north pole; it is always in line with it.

5. The United States system of land surveying is what is called "the rectangular system." It was reported to Congress on May 7, 1784, by a committee of which Thomas Jefferson was chairman. The basis is the congressional township, six miles square, containing 36 sections, or square miles. The bounding lines run north and south, and east and west. The beginning point is always the intersection of the principal base with the surveying meridian.

6. Manufacturing, commerce, fishing, quarrying, ship-building, dairy-farming, etc.

7. A strip extending due west from the old Indian territory and lying due north of the northernmost portion of Texas. It belongs now to Oklahoma.

8. The continuous land connection which North America has with South America, and the entire separation of both from foreign lands by large bodies of water.

READING.—1. To give him an "apperceptive basis." At first he has no knowledge whatever of symbols, nor has he any related knowledge in any other line; hence the foundation must be laid. The experience gained in learning a collection of words, together with the words themselves afford the child material that will enable him largely to work out his own salvation in enlarging his vocabulary.

2. *Preparation* is the "getting ready," and may be defined or explained from various standpoints. With the primary class, the teacher should get everything ready that she is going to use in illustrating the lesson to be given so that she can act promptly and systematically; in her own mind she must have thought out the different steps she should take to make the lesson produce the best effect. *Presentation* will be easy if the preparation has been complete. It should be uninterrupted, earnest, and lively, so as to enlist and hold attention. It will embody the concrete forms and their accompanying abstract ideas in such a way as to make clear the object in view; one element in presentation is the individuality of the teacher. *Application*, in this line, is the act or process of advantageously applying what has been learned to the attainment of the related unknown. A knowledge of these things will enable the teacher to so organize and systematize the work that the largest possible per cent. of teaching energy will be effectively utilized.

3. Otherwise, the reading would be but the calling of words. The words are so arranged as to express ideas; and we must see them just as the author saw them. As our eyes pass along the line of words, our minds must create the picture therein embodied, and let them so take possession of us as to live them just as the author lived them.

4. We must keep in view the idea that the pupil is to be strengthened in his power of interpretation. Choose only the best selections in the readers and use much supplementary work. [See pages 7, 8. and 9 of State Course of Study].

5. To an elementary extent. Pupils in the seventh year can interpret readily certain selections from Irving, Longfellow, Whittier; etc. Their imaginations are strong and their relations to society, to the school, and to the different institutions surrounding them are, at this period, expanding so rapidly, that their general mental strength is much greater than is usually supposed.

ALCOHOL AND NARCOTICS. —1. A physician prescribes a very small quantity, just enough to bring about the effect desired. The condition of the system is such as to respond readily to the special dose of the physician; but in health the person is under no such systematic treatment, and a healthful body is often affected by alcohol quite differently from what it is, in disease. The sense of taste in a healthful person is very likely to acquire a craving for alcoholic stimulants, whenever an opportunity occurs. This is not true in the case of a person who is sick.

2. Much of the effect of alcohol is felt in the brain; its cells become vitiated and their appearance when affected by alcohol is very different from that when in a normal condition. The alcohol has a strong affinity for the water and the albumen that make up a part of the brain substance. Such a direct and injurious effect on the material upon which depends the workings of the intellect is a step towards insanity.

3. By uniting with certain of the materials that make up these coats, their properties are destroyed, and they no longer permit the process of endosmosis and exosmosis to take place freely through them.

4. On account, here, also of its effect on the nerve cells and centers. It also has the effect, when used freely of putting the nerve cells in that sensitive condition which is one of the conditions of *delirium tremens*. "A touch and the muscular system goes off into spasms."

5. The first effect if taken in small quantities is to increase the number of respirations; in a short time however, the number decreases until it falls below the normal. Some narcotics diminish the power of the capillaries of the lungs to perform their function of oxygenating the blood.

THE Cincinnati, Hamilton and Dayton railroad has arranged to run all its suburban trains out of Cincinnati by electricity. Trains are run on the regular tracks as far out as Hamilton, twenty-five miles, and it is believed that the time is not far in the future when most, if not all, trains will be run by electricity. The C. H. & D. does more suburban business than any other road that runs into Cincinnati.

UNIVERSITY EXTENSION.—Pres. Harper and three or four of the professors of Chicago University recently spent two days in Indianapolis in arousing an interest in University Extension work. The meeting was fairly well attended, and a course for Indianapolis was arranged for.

THE Catholic Winter School of America to be held in New Orleans, bids fair to become a permanent institution. It was a great success last year, and judging from the list of lecturers for this year, there will certainly be no falling off.

TOWNSHIP INSTITUTE OUTLINES.

FOURTH INSTITUTE.

GUIZOT'S HISTORY OF THE CIVILIZATION OF EUROPE.

TEST-WORK :—NOTES, TOPICS, AND QUESTIONS,
FOR USE AT TOWNSHIP INSTITUTES.

THE CHURCH.

LECTURE V.

[*The outline as found in the State Manual, to which are added notes, suggestions and references. The references are to pages in the book itself.*]

I. Notice the elementary organisms in primitive European civilization :
(a) Municipal system. (b) Feudalism. (c) Monarchy. (d) Church. (See pages, 35, 43, 44, 45, 46, 53, 54).

II. The nature of religion which developed the church. (See pages, 127, 128, 129, 130).

III. Show that force is not essential to government. (See pages, 131, 132).

IV. Nature and functions of church government. (Page 133).

VI. The essential conditions of legitimacy in all church government. (134).

VI. Explain : (a) How the clergy is not a *caste* ; (b) how the church chose those who should exercise power. (134, 135, 136, 137).

VII. Show how the church conserved the essentials to legitimacy. How the church disregarded these essentials. Was individual reason suppressed in the church? Purpose of church councils. (137 to 144, inclusive).

VIII. The problem before the church at the incoming of the Barbarians. How met? (145, 146.)

IX. What favored the encroachment of the spiritual power over the temporal? Consider the struggle over *investitures* in this connection. (147 to 151, inclusive.)

LECTURE VI.—THE CHURCH. (*Continued*)

I. Influence of the separation of the governors from the governed, in the church. (156.) Why did this occur? (156.) How was the influence of the christian public exerted in this period? (157 to 161 inclusive.)

II. What did the church do for the advancement of the individual? (a) In the laity? (b) In the clergy? (161, 162.)

III. How did the church benefit society? (a) As to slavery? (162, 163.) (b) As to civil and criminal legislation? (163, 164.) (c) As to the penitential system? (167, 168.) (d) As to war? (168.)

IV. Character of the influence of the church on the intellectual development of Europe (169, 170).

V. The attitude of the church on questions of politics, as to the questions of power and liberty (171, 172.)

VI. Guizot on the purpose of religion in human life. "To make man *submit* and to let him still be free." Explain. (172).

[NOTE.—That mind is free which "submits" to the dictates of an inward conscience, which acts from an inward spring, which feels itself accountable to a higher law than man's, which, through confidence in God and in the power of virtue has cast off all fear but that of wrong-doing, and which offers itself up a willing victim to the cause of mankind. Man is free to put forth his moral energy against the senses, against the passions, against the world, and thus liberate the intellect, the conscience, the will, so that they may act with strength and unfold themselves forever] (Adapted from Channing's "*Spiritual Freedom*.")

VII. From what view has Guizot judged the church, from the successive events which have developed it, or from the complete whole? (174.) Explain. (173, 174.)

VIII. Periods and stages of the church's development. "The spirit of the priest and that of the temporal baron struggled within for the mastery." Explain. (See 175 to 181 inclusive.)

[NOTE.—From the chaotic condition of the church the chiefs of the clergy lost interest in their vocation to that degree that caused them to covet the independence and habits of feudal life.]

IX. The work of Gregory VII. (181-2.) "A centralized theocracy supported by monasteries." Explain. Notes on Gregory VII. He wished to establish the superiority of the ecclesiastical over the temporal power, and he succeeded in putting down the power of the emperors.—*Wheeler*.

He desired to establish a visible theocracy of which the Pope, as the vicar of Christ, should be the head. The recollection of the ancient universal dominion of heathen Rome haunted his imagination and animated his zeal. He wished to restore to Rome what Rome had lost under the emperors. "What Marius and Caesar," said his flatterers "could not effect by torrents of blood, you have accomplished by a word."—*D'Aubigne*.

His ultimate purpose was to form the church into an absolute monarchy, thoroughly organized from the highest rank to the lowest, self-centered, and entirely independent of any temporal government—indeed superior to all temporal governments.—*G. B. Adams*.

His great aim was to abolish simony and the marriage of priests. Connected with these reforms was the broader design of wholly emancipating the church from the control of the secular power, and of subordinating the state to the church. For this end there must be an abolition of *investiture* by lay hands. This demand it was that kindled a prolonged and terrible controversy between the emperors and the popes.—*Fisher*.

[See cyclopedia for the biography of Gregory VII.; read the account of his contest with the Emperor Henry IV., of Germany.]

LECTURE V.—THE CHURCH.

[The same lecture outlined more in detail, for the purpose of aiding in the mastery of the entire text.]

I. Condition of certain elements of civilization in the fifth century (124, 125). Influence and position of the Church at this time. A prevalent idea with regard to a religious corporation (126). An important question as to

the nature of religion; discussion of religion as merely a feeling (127). The source of inherent morality (128). A view of the elements of religion (128); proofs of its universality (128, 129). A religious society's need for government (129); how there comes about the rule of the fittest (129, 130).

II. A need for government outside of its coercive element (130, 131, 133); when force should appear (131). Discuss "force" and "moral suasion" in government (131, 132.) Duties pertaining to religious governments (133). The problem to be solved (133).

III. The two conditions of legitimacy of religious government (134). A standard by which to judge all government (134). The idea of *caste*; its application to the Church improper (134, 135). The progress of the Christian church, proof sufficient that it was not ruled by *caste* (136).

IV. The two opposite principles in the Church by which persons were designated (136, 137); the one that became predominant. To what the Church chiefly owed its greatness (138, 139).

V. Two bad principles :—(a) The denial of the rights of individual reason (139); (b) forced belief (140). Attitude of certain leaders of early Christian thought (140, N). Nature of the fundamental character of European civilization (141).

VI. Present limitations to government in regard to conscience (141). The attitude and aim of the church (142); the natural resistance. Heresy and its results (143, N). How the ecclesiastical government deports itself (143, 144). What criticism is made on the following :—"One might fancy one's self in the midst of the philosophical schools of Greece." (144, 145, N.)

VII. The aim of the Church in her new environment (145, 146); her method (146); the principle that aided her (147); its beneficial consequences (147). The tendency of the Church to arrogation of power (147, 148); causes contributing to such usurpation (148, 149). Conflicts between temporal and spiritual authorities (150). How and for what the Church used coercion (151).

VIII. The supremacy of the Bishop of Rome (151, 152). A special reason for the complete separation of church and state. The beginning of the authority of the Pope as a temporal ruler (152). The alliance between the Pope and Pippin; the relationship between the two powers much closer under Charlemagne (153). Establishment of papal supremacy (153, 154). Causes of its downfall as a temporal power (154).

LECTURE VI.—THE CHURCH. (*Continued*)

I. The evolution of the independence of the clergy as regards the people (156); the reason for this tendency, in a religious society, towards independence; why the effect is hurtful; the worst slavery (157).

II. The conditions prevailing as to the churchmen and the laity. An evil idea; its long life. Why a complete separation of the governing and governed is impossible (158); an illustration.

III. The power arising from ideas held in common (158, 159); effect of this power upon the church. An illustration of beneficial indirect influence (159); why sometimes it is to be preferred (160). How a great bond of union was effected between the laity and the clergy (160, 161).

IV. What the church did at this period for the individual man (161, 162); the field of her labors ; the effect outside. Progress of education from the fifth to the twelfth century (N, 162).

V. The attitude and action of the church towards slavery (163 and N). The motive that brought about manumission (163). Why slavery was not quickly removed (N, 163); an opinion held by some (N, 163).

VI. Effort of the church for the improvement of legislation (163, 164). Nature of the evidence required by the Barbarians (164 and N). Comparison of the laws of the Visigoths and the codes of the Barbarians (164 and 84, 85, 86). The influence of the Roman law (N, 164 and 165). The use of oaths by the Visigoths (165). Some of their ideas and laws in criminal matters (165, 166).

VII. The nature of the punishments inflicted by the church (167); the objects to be attained (167). What "penance" included (167, N); proof that the objects, or principles, were worthy (167, 168). Opposition of the church to all violence and war (168). (The Truce of God N, 168).

VIII. The influence of the church upon Europe (*a*) as regards society (169, 171, 173); (*b*) as regards the mind (169, 170); the theological trend of this influence and the effect (169); this influence widespread and beneficial (170).

IX. State the politic attitude of the church between power and liberty. (171). The object of the religion (172). The double problem religions are called upon to solve (172); the error they have often made; their wrong attitude towards the human soul (172); the necessity of using man's liberty in governing him (173).

X. Discuss the formation and development of the life of a great man (173, 174); how some historians fall into error (174).

XI. The state of the church in the fifth century (175); her victories under the Roman empire; her new environment at its fall; her attempt to renew old conditions and relations (175, 176), and the result.

XII. The second state of the church (176). The results of her relations with the barbarians. Two important facts: (*a*) The separation of the spiritual and temporal powers, and why (176, 177); (*b*) the establishment of the monastic orders of the west (177).

XIII. (N, 177, 178, 179). Monasticism:—Its meaning; origin; founders. Early monasteries; first complete organization; its first missionary work.

The great industry of the monks; their growth in official station and power; their debasement.

XIV. Charlemagne's attempt to revive the Roman empire (179); the result and its effect on the church. The third state of the church (179). A struggle of feelings and interest; the development of the idea of independence (180). The church's attempt at unity; the work of Hincmar; the failure to secure unity and why; a struggle for reform (180, 181).

XV. The fourth state of the church (181). The work of Gregory VII. (N, 181); his attempts toward reform (181, 182); other attempts (182 and N), and the attitude of the old monks (182, 183).

XVI. A plea for reason, in the light of free inquiry (183). A request of Abelard from his scholars (183, 184); why a wise one. Alarm of the church at the spirit of free inquiry; a struggle between its advocates and the clergy (184 and N). The enfranchisement of the commons vs. the right of free inquiry (185).

GRAMMAR.

I. Grammar.

1. The *teacher* made his report.
2. The *teacher* made her report.
3. The *boy* studies his lesson.
4. The *girl* studies her lesson.
5. The *man* is a scholar.
6. The *lady* is an author.
7. The *sun* bursts forth in all his glory.
8. The *moon* hides her pale face.
9. *He* is a statesman.

II. How is the sex of the objects expressed by the italicized words in "1" and "2" above indicated? How in "3" and "4"? How are "5 and 6" still different from "1", "2", "3" and "4" with respect to the way the sex of the objects expressed by the italicized words is indicated? Show from "7" and "8" that gender does not necessarily indicate the sex of the object expressed by the substantive.

III. From the above sentences and discussion the mind reaches the conclusion that the essential ideas of gender are :

1. It is a property (*form and relation*) of the substantive.
2. It shows how the object expressed by the substantive is *thought* as regards sex.

IV. Define gender. Show that the definition, "Masculine gender is that gender which denotes that the object of thought expressed by the substantive word is of the male sex" is not accurate.

V. Show how the above lesson is in harmony with the subject matter, purpose and steps in grammar.

VI. Show that any general notion may be arrived at in grammar in a similar manner as in the case of gender.

The nine sentences in this outline are selected with a view to showing the procedure in working out the ideas underlying gender. Each sentence has a special purpose of its own. Sentence "1" is intended to show that the fact that "teacher" expresses an object possessing male sex can be determined only by the relation of the word "teacher" to the word "his." Sentence "2" is similar to sentence "1" except that the object expressed by the teacher has female sex.

Thus in sentences "1" and "2" the sex of the objects expressed by the italicized substantives is known by their relation alone.

In sentence "3" and "4" the sex of the objects expressed by the italicized substantives may be known from their form alone, or from the relation to the pronouns "his" and "her." So in these two sentences the sex

of the objects expressed by "boy" and "girl" is indicated by both form and relation.

In sentence "5" and "6" the sex of the objects expressed by the italicized substantive is known by the form only of the substantive. Thus, from all these sentences, "1," "2," "3," "4," "5," "6," the thought to be obtained is that the sex of an object expressed by a substantive may be known by its form alone, by its relation alone, or by both form and relation.

Sentence "7" and "8" are intended to show that gender does not mean sex, and that gender does not always indicate the sex of the object expressed by the substantive; for in sentence "7" and "8" "sun" is of masculine gender and "moon" is of feminine gender, but the objects expressed by these substantives have no sex at all.

Sentence "9" is placed in the list to show that gender does not belong to the noun alone, but also to the pronoun.

From the italicized words in sentences in "1"—"6" inclusive also "9," the mind reaches the conclusion that this something—form and relation of the substantive—shows the sex of the objects expressed by the substantives. It knows this is called gender by grammarians, or it does not know it. If not, it must learn it right here. But a further consideration of the substantives "sun" and "moon" in "7" and "8" shows that the conclusion reached above is not wholly correct; for the form here shows that neither object has sex, while the relation alone would show that one has male sex and the other female sex. All grammarians agree that "sun" is in the masculine gender and moon in the feminine gender. So it appears that in some cases that the object is only *thought* as having sex or a certain sex; *i. e.*, the attributes are given to the object by the mind that the object would possess, if it had sex, or a certain sex.

It may be that it would be more consistent, if masculine gender always denoted male sex, feminine, female sex, neuter, no sex, and common, a common sex. I am inclined to think that it would be more consistent, but what is now called gender by grammarians, does not always indicate the sex of the object expressed by the substantive; and what is called masculine gender does not always indicate male sex; and the same thing is true with respect to the feminine gender, the neuter gender, and common gender. For example, "sun" in sentence "7" in the outline is masculine gender, but it expresses an object that has no sex; so "moon" in sentence "8" is feminine gender, but the object expressed by the word, "moon," has no sex; likewise we say corn, in the sentence, The corn is tasseling, is neuter gender, while almost every one knows it possesses both male and female sex and similarly we use the neuter pronoun *it* when referring to small children, though it is well understood that children possess sex.

Then, the thought is, that gender does not necessarily indicate the sex of the object expressed by the substantive, but indicates what the mind thinks of the object expressed by the substantive as regards its sex. Sometimes the mind thinks certain attributes of objects because the objects actually possess male, female, no sex, or merely sex, but again the mind thinks the object as possessing certain attributes that it would have, if it possessed male, female, or no sex or merely sex.

It is not the purpose of these notes on this outline to make an exhaustive exposition of gender, but I wish to call attention to one or two points that so far as I know do not appear in any text-book on this subject.

1. It seems to me that there are good grounds for a common gender, of a similar character to masculine and feminine gender. It was mentioned above that corn possesses both male and female sex; this being true, why, on the basis of sex, is it not common gender? There are thousands of plants and lower forms of life of similar character. Then, since male sex furnishes the grounds for masculine gender; female for feminine gender; no sex, for neuter gender, it follows that substantives expressing objects to which both sexes are common, should have common gender.

2. Gender ought to be so considered that masculine gender would *always* indicate male sex; feminine, *always* female sex, etc. Then "sun" would be neuter gender; "moon," feminine gender, and "corn," common gender, etc.

From the above discussion the mind reaches the conclusion that gender is that property (*form* and *relation* of the substantive that shows how the object expressed by the substantive is *thought* with respect to sex.

The definition quoted does not seem to me to be accurate for the following reasons:

Sex means the physical difference between male and female. [*See dictionary*]. The definition says that the object of thought is of the male sex. In the sentence, "The sun bursts forth in all his glory," the "object of thought" must mean either the physical object *sun*, [and I believe that is what most persons would understand by the expression, just as we would say, "That man is the object of hate or attention," etc.,] or the *idea* of this physical object. The conclusion reached is the same in either case; viz.: that the object of thought *does not* possess this physical difference called sex. Then, I can not see how "sun" can be of masculine gender, according to this definition, yet every one knows that it is of masculine gender.

The fault in the definition is that it is not sufficiently inclusive.

I am willing to leave it to other teachers of Indiana whether this is a "superficial view."

GEO. W. NEET.

HISTORY.

I. Method applied to history is the mental activity involved in coming into possession of the thought and feeling of the people in their actual struggle for freedom as manifested by events and in turn affected by events.

II. Subject-matter.

1. The spiritual life of the people as manifested by events in history and in turn affected by these events.

Note.—The real material of study, then, is the spiritual struggle of the people—their thoughts and feelings—while events are the means by which this struggle may be studied. Then the emphasis is to be placed upon the thought and feelings, and the events are to be viewed only as related to these.

III. Purpose.

1. To give the child an insight into the real nature of history.
2. To give him a love for the study of the race in its struggle for national freedom.
3. To develop moral character by causing the pupil to love and honor all that is noble in his country's progress and to disapprove of the selfish, grasping and ignoble.

IV. A lesson to first and second year pupils.

1. The story of Roger Williams to the pupils in a simple, though interesting and accurate, way by the teacher.

- a. Phases of the conflict.

- 1¹. Between church authority and conscience.

- 2¹. Between the state and individual rights.

- a¹. Causes.

- 1². Immediate.

- 2². Remote.

- b¹. Effect.

- 1². Immediate.

- a². Banishment of Roger Williams.

- b². Founding of Rhode Island.

- 2². Ultimate.

- a². An asylum for the persecuted.

- b². A beacon light lifted on the shores of

New England to guide the people toward freedom of church and state for centuries. [Show that the above may be impressed upon the mind of the child by the teacher.]

V. The relation of the above lesson to the subject-matter and purpose of history.

VI. Educational value of the above lesson. [See pp. 24-26, State Course of Study.]

It must be held in mind that the term, *method*, in these institute outlines is always used to mean a mental process—the mind's activity of identifying itself with the thought in the thing studied. Then it may be said that method in history is the mind's activity of coming into possession of the thought in the subject-matter of history. But this formal statement may mean much or little to us accordingly as we do or do not grasp the history concept.

It is the thought of the author of this outline that *the stream of growth in the life of a people is the history of that people*. This growth, as all growth, is a constant struggle. So we mean nothing different from the above when we say that the history of the people is the actual conflict in their lives in their struggle for freedom.

The following is a statement of the subject-matter of history in harmony with the thought in this outline. The subject-matter of history is the growth in the life of the people as manifested by events and in turn affected by these events, or the events of mankind as manifesting and affecting the growth in

the life of the people. An analysis of the subject-matter reveals the following :

1. Historical events.
2. The growth in the life of the people.
3. The manifestation of growth by events.
4. The effect of the events on the growth.

For example, the French and Indian war is an historical event. The thoughts, feelings and choices of the people led to this war. Thus, this war was a manifestation of the struggle of the people toward freedom. The war caused the people to think, feel and will in certain ways that affected their growth. This war probably determined that North America should in the future be inherited by an English speaking nation instead of a French speaking nation; that the sturdy Anglo-Saxon institutions should be planted in North America instead of the decaying ones of the French at that period. The effect of this event on the growth of the people is seen to be far-reaching. Then the people grew because of the struggle. Thus, it is seen that the four points that an analysis of the subject-matter reveals are to be found in every fact of history.

A further study of the subject-matter reveals the fact that it is a constant and accurate guide to the teacher of history. It not only tells him what facts to teach in history and in what relation to teach them, but it also makes logical divisions of the subject for him and distinguishes between the important and the unimportant. Thus, those events will be chosen that manifest and affect the growth of the stream of life. It was not an uncommon thing a few years ago to find in our text-books of history much material, if related at all, only remotely to this growth. Our subject-matter tells us we would not teach this in our history work. It also tells that no event in history is to be taught as isolated, that each one is to be viewed as related to this stream of life. This means that every historical event is related to every other one through the spiritual life of the people; that isolation does not exist in the realm of history; that history is a growth and every historical event has had a bearing on that growth; that historical events are not interpreted until this relation is seen.

A close adherence to the meaning of this phase of the subject-matter of history would remedy the greatest defect prevalent in history teaching.

Our subject-matter further tells us that some events in history are important and some not so important; the important ones being those that manifest, to a large degree, the stream of life, or have had much effect upon it. Thus it tells us to emphasize the important and to pass over the less important more lightly.

Finally, the subject-matter indicates the logical divisions of the subject. In the growth of the people, characteristic lines have developed more rapidly at some periods than at others. The growth of these characteristic lines gives bases for divisions of our subject. For instance, there is a period of our history when the predominant growth was in the *planting and development of local institutions*; there was a period when *the characteristic growth was toward union*; also a period when *the characteristic growth was toward national development*; thus, giving the first logical division of the subject of

United States history. The teacher who sees clearly his subject-matter and makes what he sees a living force in his work, will teach history well.

This brings us to the discussion of the purpose of history. This may best be discussed as intellectual, emotional and volitional.

1. The intellectual purpose of history is to give a knowledge of the planting and growth of nations; of civilization and its conditions and laws; of great individuals and their deeds; also to plant in the child moral notions that may grow and bear fruit, and to give the child an insight into the real nature of history. The intellectual faculties are to be stimulated and exercised, and intellectual tendencies strengthened.

2. One great purpose of the history work is to give the child a permanent, enduring, drawing interest not only in the history of the race, but in school work of all kinds. It should give him a feeling of love and admiration for all that is good and noble in the lives of both the nation and individuals, and the feeling of hate for the bad and degrading in both.

3. The volitional purpose is to stimulate the learner to place his life in harmony with the laws that govern right human actions as revealed in the study of national and individual life; to stimulate him to avoid the things that will degrade him or his brother man, as manifested in the life of the nation or in the life of the individual.

The one great purpose of the history work is to bestow upon the learner moral character power. This purpose is intellectual, emotional, and volitional.

The lesson chosen and outlined is one of many that would be suitable for pupils of the first or second years.

The relation of this lesson to the subject-matter of history is that of a part to the whole, and the relation to purpose is that of means to end.

The educational value of this lesson is found in the fact that the student who masters it is in possession of the following:

1. Thoughts that show the true nature of history.
2. Good drill in reasoning on the right and wrong in human actions.
3. A conflict between the right and wrong.
4. The ultimate triumph of the right.
5. A love for Roger Williams and an admiration for his character.
6. Correct moral notions as embodied in Roger Williams.
7. A stimulus to moral character power.

GEO. W. NEET.

FIFTH INSTITUTE.

LECTURE VII.

[The outline as found in the State Manual, to which are added various notes.]

I. Summarize the points of contrast between the cities in the twelfth and eighteenth centuries. (See text-book, pages 187 to 190 inclusive).

II. State of the cities from the fifth to the tenth century (pages 192 to 197 inclusive).

III. Importance of the charters (pages 201 to 203).

V. Social and moral effects of the enfranchisement of the cities (204 to 209).

V. Were the cities free or servile during the feudal regime? (211 and 211, N).

NOTE.—The cities of the Empire had, as feudalism developed, fallen into its order in two classes. Some of them held their privileges of the Emperor himself, were his immediate vassals; others were subordinate to some feudal lord and were subjects of the empire only through him. The position of those immediately dependent upon the Emperor was much more advantageous than the position of those who had lesser and nearer masters. The imperial supervision was apt to be much less exacting than the overlordship of princes who, having less wide interests to care for than those which busied the Emperor, could render their power greater by concentration. They were always near at hand and jealous of any movement of independence on the part of the towns within their domain; the Emperor, on the other hand, was often far away and never by possibility so watchful. He was represented always by some deputy; but the presence of this officer did not greatly curtail municipal self-government. In the thirteenth century even this degree of control was gotten rid of at the suit of some of the cities. They were allowed to become "free" imperial cities, bound to the Emperor only by sworn allegiance, not by any bonds of actual government. The next step in the acknowledgment of their independence and importance was their admission to representation in the Diet of the Empire—and such recognition was not long delayed. The role of these great free cities in imperial affairs became one of the most important of the many independent roles played on the confused stage of that troubled time. Lubeck, Hamburg, and Bremen retain to this day a certain privilege of position as free cities in the German empire. (*Woodrow Wilson* on the "free cities of the German Empire").

VI. How did the cities grow during the feudal era? (195, 196).

VII. (1). How did the cities gain enfranchisement?

NOTE.—By arms, by skillful negotiation, or by outright purchase, the cities gained for themselves one right after another from their feudal lords. Whether actually little independent states, owing merely a nominal dependence on the emperor, like many cities of Italy and Germany, or never having advanced so far as this, like the cities of France, they all acquired self-government in internal matters. They became little republics governed by self-elected officers, representative councils, and public assemblies of all the citizens, the latter meeting in the market places at the sound of the bell.—*G. B. Adams*.

It was in the eleventh century that this revolt of the cities against the feudal lords became general. During the course of this and the succeeding century, the greater number of the towns of the countries of western Europe either bought or wrested by force of arms, charters from their lords or suzerains. The cities thus chartered did not become independent of the feudal lords, but they acquired the right of managing, with more or less supervision, their own affairs, and were secured against arbitrary and oppressive taxation.—*Myers*.

VII. (2). Result of the enfranchisement of the cities :

(a.) Unchanged relation to the government (210, 211),

(b.) Formation of a new class in society (212).

(c.) Struggle of classes (213).

NOTE.—Under the protection of their charters, they grew in wealth and population, and very many of them became at last strong enough to cast off all actual dependence upon lord or suzerain, and to become in effect independent states—little commonwealths. Especially was this true in the case of the Italian cities, and in a less marked degree, in that of the German towns.

VIII. Causes of the political humility of the burgesses (207, 208).

IX. Internal government of the cities (209, etc.).

A comprehensive outline of Lecture VIII, to be used as an aid in gaining a complete knowledge of the text. The figures refer to pages in the book.

I. Three fundamental elements of modern civilization (187). Distinctions to be noted between free corporate cities and the other two elements as to the time of their importance (187, 188).

II. Contrast the condition of the "Third Estate" of the twelfth century with that of the period of 1789 (187, 188, 189). Growth of the centralization of power in France (N, 188 and 189). The change wrought by the Revolution of 1789 (N, 189).

III. Contrast the burgesses of the nineteenth century and the "vassals" of the twelfth (189, 190); character of one of their free cities (190). The great change wrought in the social condition of the burgesses during this period (190). The lineage of the French nation (190).

IV. The two great questions to be determined (191). Condition of the towns between the fifth and the tenth century (193, 194). The *Curia* (194 and N) of the towns; when and why a new activity arose in them (195); the function and the effect of the Church asylum (195).

V. The most potent cause of the revival of city life (196, N); influence of "fairs" (196, N) how "guilds" arose (196, N).

VI. Results of the barbarian tendency to pillage (197); the relations of the cities to the feudal lords (N, 198); the increased necessity in the cities for defense (198); the example for resistance before them (198, 199); the lesson applied (199).

VII. Comment on the precise date of the general insurrection of the cities (199). Character of the war (199, 200); result if the insurrection failed (200). The house of the twelfth century (200). Treaties (201 and N).

VIII. The insurrection general—in what way? (201); local—in what way? (202). The vicissitudes of the struggle (202); effects of royal influence (202, 203); the final outcome (203); nature of the charters (203, N).

IX. How the cities gradually formed a connection with the general government (203, 204). The conditions that favored the formation of a great social class (204); the elements composing it then—and afterwards (204); the secret of its destiny (204). Its rank (204, N).

X. The struggle of classes:—the result in Asia (205); in Europe (205). What has given rise to the most productive principle of development in civilization—national unity? (205, 206.)

XI. The political humility of the citizens (206, 207). The two sources of ambition and energy of mind (207); the burgesses of the middle ages lacking in both, in *general* affairs (207, 208); their energy and courage in *local* matters (208, 209).

XII. The powers of various municipalities gradually transferred to Rome (35, 209); the state of the municipal system at the fall of the Roman empire (210); how the cities regained their sovereignty (210); always a trace of exterior sovereignty (210, 211). [See foregoing notes on topic 7, in outline from State Manual.]

XIII. The city governments of early times (211), (the two general types 211, N). The two simple elements of the internal organization (212). Character of the population (212); its division into two classes (212); the difficulties surrounding the upper class (213). The two spirits prevailing (213). The diversities prevailing in the history of European free cities (213, 214).

XIV. (N, 214). How the cities gained enfranchisement. [Also, see note on topic 7, in outline from state manual]. Character of the charter obtained. Attitude of the king toward the charters (214, 215); [see note below]; the result in France; in Italy; in Germany (215) in England (216). Nature and power of the Hanseatic League (214).

NOTE.—The monarchs very early recognized in the cities their natural allies against the feudal system, and though no formal alliance might be entered into between them, and though very possibly the kings did not deliberately encourage the growth of the cities with a view to raising up a power in the state, able to outbalance the nobles, still they were not slow to avail themselves of all the incidental advantages which the rise of such a power offered. The greatest permanent gain which the rise of the cities brought to the kings was no doubt found in the increase of wealth which enabled them to introduce a regular system of taxation as a substitute for the feudal services on which they had been formerly obliged to depend.

LECTURE VIII.

[*The outline as found in the State Manual, with page references to the book itself.*]

I. The rise of nationality as the essential feature distinguishing modern Europe from the Europe of the early ages [219, 220].

II. Periods in the development of European civilization. [a] Origin. [b] Experiments. [c] Development. The crusades the greatest event of the second period.

III. Characteristics of the crusades. [a] Universal [222]. [b] National. In what sense [222, 223]? [c] Outcome of the heroic in the nation [223].

IV. What influence put an end to the crusades [225]?

V. Causes impelling Europe into the crusades. [a] The moral impulse: religious zeal against the Mohammedan [225]. [b] The social state of Europe demanding enlargement [226].

VI. How did the crusades affect the relation of the laity to Rome [232]?

VII. Influence of the crusades on the small fiefs? On centralization [233, 234].

LECTURE VIII.

[*A more comprehensive outline, to be used as an aid in gaining a complete mastery of the text.*]

I. What is the origin of modern domestic life? [218; and read pages, 105 and 106.] What is the origin of the feeling of personal independence? [218; read page 57.] Review the points we have observed with reference to the Church [218]; to the municipalities [218; read pages, 129, 140, 147, 151, 157, 205, 206, 207, 208.]

II. The elements of society in the period under discussion [219]; what political feature was lacking [219]? The two great objects that come into view in the seventeenth and eighteenth century [219]. History:—subjects important; unimportant [219, 220].

III. Describe the seemingly agitated unprogressive condition of the period from the thirteenth to the fifteenth century [220, 221]; the movement that was really in it [221].

IV. Describe the three great periods in the history of European civilization [221, 222]; [and see N, 222.]

V. The first great European event [222]; show the *universality* of the crusades [222]. In what sense were they *national* [222, 223]? *heroic* [223]? The first crusade [223; N, 225]; the second [223].

VI. Gradual decay of the spirit of the crusade [224]; due to what change [225]?

VII. Two great causes impelling Europe into the crusades [225]:—

[a] The *moral* cause. Its objective point. A great struggle [225, 226]; its principal crisis [226]; a historic parallel [226].

[b] The *social* cause. Show the lack of *generality* in Europe from the fifth to the eleventh century [226]. The desire for change, variety and a broader freedom [226].

An additional cause [N, 226, 227].

VIII. Different characteristics of two classes of historians of the crusades [227]; their different attitudes towards the Mohammedans [228]; Show the impartial judgment of the latter class, and give reason for it [228].

IX. The principal effect of the crusades [228, 229]. The general effect of travel [229]; its effect on the crusaders [229]. How they were affected by the society [a] of the Greeks; [b] of the Mussulmans. The relations brought about by the Mongol emperors and the Christian kings [230]. The extensive intercourse brought about by the east and the west [N, 230, 231]. The spirit of travel; of increased commerce; of exchange of ideas; of search for knowledge; of discovery [231 232].

X. The relation of the laity to Rome enlarged by the crusades [232]. The constancy of religious notions exhibited [232]. The field of thought enlarged [233]. The moral cause of the crusades no longer a factor [233].

XI. Effects of the crusades:—

[1.] Upon *feudalism*—[See note 11 below.]

[a] The increase in the number of fiefs. How brought about [233, 234].

[b] The creation of a number of central points in society [234].

[2.] Upon *commerce* [234, 235]; and upon the introduction into Europe of certain means of civilization [236]. [See notes 7 and 10 below.]

[3.] Upon centralization in general [235].

[4.] Upon the mind of man [236]. [See notes, 7, 8, 9 and 12, below.]

[5.] Upon the state of society [236, 237]. [See note 9 below.]

XII. The forces that impelled the crusades [235]. Their disappearance [235]; what took their place [235]. One class still adventurous, and why [236].

NOTES ON CRUSADES.

1. When the Seljuk Turks, in the latter half of the eleventh century, 1076, took possession of Palestine, the Christians, who had long been wont to undertake pilgrimages from all parts of the western world to the Holy Land, were obliged to endure the most harsh cruelties at their hands. Hence arose a passionate eagerness through all western Europe to recover Palestine from the Mahometans, and to check the advance of that detested religion. The first crusade [1096-1099] was set in motion by Peter the Hermit, with the encouragement and help of Pope Urban II.

The progress of the Christian armies led by the chivalry of Europe proved irresistible, and Syria and Palestine were wrested from the infidels. But the conquests thus made were preserved with extreme difficulty, and always held by a most precarious tenure. The crusades, comprising eight or nine expeditions, lasted through two centuries, the final expulsion of the Christians from Syria occurring in 1291.—*Wheeler*.

2. The most durable monuments of human folly.—*Hume*.

3. Urban and Peter! the corpses of two millions of men lie heavy on your graves, and will fearfully summon you on the day of judgment.—*Heller*.

4. Many prepared never to return; nearly all looked forward with beating hearts to an unknown and distant land, brilliant with all the glory of miracles and the splendor of fairy tales. The lower classes were frantic with excitement. The peasants and artisans, who took no part in the war and were not admitted into the regular armies, were those upon whom the sufferings at that period fell hardest, and they pressed with the wildest zeal to join the Holy Crusade.—*Von Sybel*.

5. There were those who at first had no desire to set out, and who laughed at those who parted with their property, foretelling them a miserable voyage and a more miserable return. The next day, these very mockers, by some sudden impulse, gave all they had for money, and set out with those whom they had just laughed at. Who can name the children and the aged women who prepared for war; who count the virgins, and old men trembling under the weight of years? You would have smiled to see the poor shoeing their oxen like horses, dragging their slender stock of provisions and their children in carts; and these little ones, at each town or castle they came to, asked in their simplicity, "is not that the Jerusalem we are going to?"—*Guibert*.

6. Nothing is more easy than to detect the worldly motives which impelled the ruder population of the Western world to roll in eight successive and desolating torrents towards the shores of Africa and the East. The crusader received a plenary indulgence, that is, the remission of all penances, by which, as he believed, his sins must otherwise have been expiated, either in the present life or in purgatory. During his absence the church

became the protector of his wife, his children, and his estate. Whoever might injure them was declared excommunicate, *ipso facto*, and without further sentence. His debts ceased to bear interest from the day of his departure, even though he had bound himself by an oath to the payment of them.—*Sir James Stephen*.

7. The Crusades exerted a favorable and very powerful effect upon literature, art, science, and commerce, and from them may be dated a great quickening and broadening of the intellect throughout Europe.—*Wheeler*.

8. They left a wider gulf between the Greek and the Latin churches, between the subjects of the Eastern Empire and the nations of Western Europe; but by the mere fact of throwing East and West together, they led gradually to that interchange of thought and that awakening of the human intellect to which we owe all that distinguishes our modern civilization from the religions and political systems of the Middle Ages.—*G. W. Cox*.

9. They gave the advantages of travel to the people of Europe. They brought them into contact with higher civilizations than their own, in the Greek empire and among the Saracens, and thus broke down their narrow self-conceit, broadened and liberalized their minds, and taught them the common humanity of all races, the brotherhood of man.—*G. B. Adams*.

10. They increased and developed commerce temporarily by the need of transportation for men and supplies; permanently by the introduction of many new articles of use and luxury. Connection between Europe and the remoter East, India and China, began during this period. Travels to distant lands in search of information or of commercial profit became more frequent. All the chief countries of Asia, the Central Africa of those days, were visited by European travelers and merchants, and Mongolians appear at the European courts.—*Id.*

11. The work of the Crusades in helping to do away with the feudal system, whose mission was now drawing to an end, was by no means slight. Many of the feudal nobles were compelled to sell their lands to obtain the means for these expeditions, and a portion of the lands thus sold passed into the hands of wealthy merchants and citizens. The crusading experiences also created a taste for city and court life, in opposition to the more local and isolated life natural to feudalism, and by the introduction of general ideas and by the growth of general interests, the feudal system was weakened.—*Id.*

12. Perhaps the most important effect of the crusades was the assistance which they gave in awakening the European mind; not that they began this awakening, nor without them it would not have occurred, but they gave an impulse to thought and to learning which was of the greatest value. From this time on there is an increasing intellectual activity, a growth of real learning throughout the West.—*Id.*

COMPOSITION.

I. Subject-matter.

1¹. Discourse in the process of construction for a given purpose as to its correctness, force, clearness and elegance.

2¹. The relation of composition to other language studies of the language group.

1². To grammar.

1³. Likeness.

1⁴. In general, they both deal with language.

2⁴. They both have as one of their purposes the development of the power in the child to think readily and accurately.

2³. Difference.

1⁴. They deal with different language units as a whole; grammar with the sentence, and composition with discourse.

2⁴. Composition deals with language as an unfinished product—in the process of construction, while grammar deals with the constructed sentence, a finished product.

3⁴. The primary purpose of composition is different from the primary purpose of grammar in that, while both aim at thought development, composition emphasizes its expression in good, elegant, energetic English.

II. Work out the relation of composition to the other language studies as indicated in the discussion of its relation to grammar.

1¹. The teacher should see clearly the relation of composition to the other studies in the language group for the following reasons :

1². It will give definiteness to his work. This means organization, which means concentration in the subject taught.

2². It will enable the teacher to distinguish between the important and the unimportant.

It is the thought of this outline that the ultimate purpose of composition is to give the learner the ability to express his thoughts in correct, vigorous, clear, elegant English. This is not to be construed to mean that emphasis is not to be placed upon thought development, for that is assumed as fundamental.

It may be said that language is the subject-matter of all language subjects, and, therefore, is the subject-matter of composition; but this, while true, is too general to be of much help. A little thought reveals the fact that some language subjects deal primarily with the word, some with the sentence and some with discourse. The following outline will make the thought clear :

1. Language units.

1¹. The word.

1². Studies that deal primarily with the word.

1³. Orthography.

2³. Orthoepy.

3³. Etymology.

4³. Lexicology.

2¹. The sentence.

- 1². The study that deals primarily with the sentence.
 - 1³. Grammar.
- 3¹. Discourse.
 - 1². As a finished product.
 - 1³. Language studies that deal primarily with discourse as finished.
 - 1⁴. Reading.
 - 2⁴. Literature.
 - 3⁴. Rhetoric.
 - 2². As an unfinished product.
 - 1³. Language studies that deal primarily with discourse in the process of construction.
 - 1⁴. Composition.
 - 2⁴. Primary Language.

It will be seen from this little scheme that composition deals with discourse, but more definitely that it deals with discourse in the process of construction primarily. We thus distinguish between discourse as finished and unfinished. For example, any writer in the process of embodying his thoughts in language is making discourse, and the discourse he is making is discourse as the unfinished product; while a selection such as "Evangeline" or "Thanatopsis" is completed—is the finished product.

A writer must write with a definite purpose in view. This purpose may be intellectual, as when the thought is merely to impart information; it may be emotional, as when the purpose is to arouse a feeling of sympathy, love, admiration, etc.; it may be volitional, as when the purpose is to prompt action.

In the light of the principle that we learn to do, in the use of English, by doing, the thing we have to master in our composition work is discourse in the process of construction so that it may be a first-rate instrument in conveying thought.

An analysis of the subject-matter of composition reveals the following :

1. The thought to be expressed.
2. The medium to be mastered in the process of becoming.
3. The effectiveness of the medium.

Thus a writer has no use for language except to produce by it in the minds of his hearers or readers a mental experience akin to his own. So the thought to be conveyed is first, and is always in harmony with the mental experience to be produced, the purpose.

The medium is to be mastered while doing this, *i. e.*, one must learn to use a good medium while his mind is engrossed with the object of thought. He is master of English only when he has done this.

The effectiveness of the medium demands that it be grammatically correct, vigorous, clear and elegant.

It seems to me that the relation of composition to grammar is stated pretty clearly and fully in the outlines—so fully that nothing need be added.

By noticing the scheme of language studies presented above, the relation of composition to the other language studies is easily seen. Perhaps a discussion of its relation to one or two will suffice. It is more closely related

to primary language than to any other subject; They both deal with discourses in the process of construction; they both aim at the mastery of the English language as an instrument for conveying thought; they also both aim at developing in the learner the power to think accurately and readily. So far likenesses have been noted, but in the primary language emphasis is about equally placed on oral and written expression, while in composition there is greater emphasis on written expression.

Composition is more likely to be confused with rhetoric and grammar than with any other subjects of the language groups. Therefore, the relations among these three subjects should be held clearly in mind by the teacher. A fundamental difference between composition and rhetoric is that rhetoric deals primarily with discourse as a finished product, while composition deals with discourse as an unfinished product.

Enough has been said, it is hoped, on this subject to show that the teacher who does not understand the processes of discourse construction will be a failure in composition work.

GEO. W. NEET.

SPELLING.

I. Method in spelling is the mental process by which the pupil masters the subject matter of spelling.

II. Subject-Matter.

1. The subject-matter of spelling is the written word as to its correct form, the letters of which it is composed, and then proper arrangement.

III. Purpose.

1. The ultimate purpose in teaching spelling is to give the student the power to write words correctly when expressing his thought.

NOTE.—Spelling deals with the form of words, and the pupil should be trained, therefore, to observe form carefully.

Since the pupil learns to spell in order that he may write words correctly in expressing his thought, spelling should be primarily written work, and only incidentally oral. But English spelling will not be learned, if dealt with only incidentally. To deal with it incidentally means, as a rule, to slight it. Neither will it suffice just to spend fifteen minutes each day in writing words selected at random by the teacher. Spelling, whether it pays for the time spent on it or not, if learned, must receive the due and careful consideration of both teacher and students.

IV. Steps. In general, the following:

1. A line of copy work.

2. A line of dictation work.

3. Spelling the necessary words to express the thought when the mind is engrossed with the object of thought.

4. A line of work in which the difficult points in the words are worked out, together with the grounds for the difficulties.

5. Building up lists of words from stems, their spelling and the analysis of lists of words into roots and affixes.

V. Illustrate the procedure in each of the five phases of spelling work indicated above.

VI. Educational principles with which the above is in harmony.

NOTE.—The teacher should make a constant effort to lead the child into the habit of observing the language forms in all his written work. Word list for spelling may be made as follows :

1. Lists of words with difficult combinations to represent the elementary sounds.
2. Lists of words of the same pronunciation with different spelling and meaning.
3. Words of like spelling, but two or more pronunciations and meanings.

When it is said that the subject-matter of spelling is the written word as to its correct form, the meaning is that English words are to be mastered as to letters that compose them with their proper arrangement. This constitutes spelling, and the activity of the mind in the mastery of these written words constitutes method in spelling. It is the thought in this statement that the *written* and not the oral word is to be mastered. This is not to be construed to mean that work upon the oral word is of no benefit, and therefore should never be done, but it is to be regarded as only a means to an end—the mastery of the written word.

The end in view in spelling is not merely to give the child a mastery of the correct form of the written word when his attention is directed to the form, when his mind is engrossed with the form as it is when he is reciting a spelling lesson, but to give him such a mastery of the form of written words that he will write them correctly when his mind is engrossed with the object of thought. This seems to me to be the only purpose of the spelling work that should be held in view as special. Of course, it gives a hint of mental discipline, but mental discipline may be better given by subjects more interesting, and more in the line of culture giving. If mental discipline were the greater purpose in spelling work, we would bestow a blessing upon the child and the school by dropping it from the school curriculum. The ultimate aim is to give the child the habit of writing words correctly in expressing his thought. It is the thought of the outline that spelling work should be primarily written, only incidentally oral. This is in harmony with the principle that the child learns to do by doing, and it may be added, by doing the thing he is to learn and not by doing something else. Hence the child will not best learn written forms by drill in oral spelling—the doing something else. But it seems to me that we are not justified in saying that oral spelling is of no value. A careful examination of English words will show that the sounds in the oral work are of material help in making the written form. I find that much of the bad spelling among pupils is directly traceable to the fact they do not know accurately the oral word. For example, the child spells the word *governor*, *govnor*, because he thinks the oral word is göv-nôr. If one will examine his own mind in spelling a word about which he is doubtful, he will appreciate how large a part oral spelling has to do with its correct written form.

If the reform proposed by the Standard Dictionary in English spelling should be adopted, oral spelling will, in my opinion, become a large part of our spelling work. I understand that a reform is proposed with respect

to four or five thousand words whose peculiar combinations to represent elementary sounds and letters make them difficult to spell. According to the reform proposed, the word, *thought*, would be spelled *thot*, the word, *receipt*, would be spelled *recet*, etc. So it seems to me that, after all that has been said derogatory to oral spelling, it is a valuable kind of exercise and has its place in our school work ; not as an end in itself, but as a means.

The simplest kind of spelling work is merely copy work. It is not a line of work that is to be carried to any great extent, but may be used to good advantage with small children, those just beginning spelling work.

A second line of work, a phase of which is usually done to the exclusion of all others, is dictation work. By this it is not meant merely pronouncing lists of words for students to spell, though this is a part of it. Stories and sentences are to be dictated to the children with a view to giving them practice in writing words correctly when their minds are engrossed with the object of thought. Then the words incorrectly spelled should be selected for special lessons. This is the only way that the teacher may be sure that the children have mastered the written forms. It is not uncommon to find persons who are good spellers orally, or in written spelling who, when called upon to think vigorously, make many mistakes in their spelling in expressing their thoughts in writing. Such persons usually say, "I know how to spell that word, but just missed it."

The third line of spelling work is the spelling that is done in all written school work. It should be watched carefully. No incorrectly spelled word should ever pass by unnoticed. Eternal vigilance is the price of good spelling.

In the fourth line of work indicated in the outline, words of difficult spelling because of the peculiar combinations that represent the elementary sounds are to be chosen for special lessons. Thus such words as *enough*, *deceit*, etc., would be studied as follows: Enough is a difficult word to spell, and there are two points of difficulty in the word: 1. ou says û in this word, but there are other ways of saying û. It may be said by ù alone, and by ò alone. So the child has to remember which way it is said in this word. 2. gh says the sound of f in this word, but the sound of f is said by f alone, and by ph. So it must be remembered which way the sound of f is said here.

The word *deceit* furnishes two points of difficulty: 1. the c; 2. ei.

This seems to me to be a very valuable line of spelling work. Its distinctive purpose is to lead the child into the habit of observing the different points in words hard to spell, together with reasons for these difficulties.

The last line of work indicated is best suited to the more advanced grades. It may be illustrated as follows:

Portare—to carry.

1. Report. 2. Deport. 3. Export. 4. Import. 5. Purport. 6. Portable, 7. Portly. 8. Transport. 9. Support. 10. Disport. The words should be mastered as to spelling, analyzed into stem and affix, etc.

The distinctive principle with which all this work is in harmony is *that meaning is the strongest bond of association with the form of a word*.

The mind grows by its own activities. The mind tends to act again as it has acted.

GEO. W. NRET.

LITERARY INTERPRETATION.

[*Mr. Tompkins's "interpretation" is very complete, and it is thought that the following illustration will be of more benefit to teachers than further suggestions would be*].

While every poem has its universal—its idealized, emotional life—it has also its particular side. The poet sees the universal at work in realizing itself. This self-realization of the idea always takes place through a particular form, which we call the embodiment. It is the union of the universal and the individual that gives value to either. Abstract, cold-blooded love can not touch us; but when a Beecher sells a slave from his pulpit the emotional nature bursts forth into flame and the contribution baskets are filled, and the platform carpeted, with watches, rings and jewels. As individuals we are joyed at seeing another individual give freedom to the universal nature working through it, for we feel not only our kinship with it, but we feel that it is, in a measure, our savior, in that it has given living evidence of the possibility of realizing the ideal. We feel that a strong element in the saving power of Christ was in the perfect life he led. Its beauty saves us. It creates a stronger tension within and at the same time teaches us to destroy the tension in the realization of the ideal.

The individual phase of the poem does not always set forth the picture complete, but many times makes the reader feel his own freedom in leaving him to create the whole when but a phase is presented. It is perhaps always so to a greater or less degree. This point seems well illustrated in the little poem, "The Broken Oar"—found in the Riverside Literature leaflet of Houghton, Mifflin & Co.—a brief interpretation of which may be suggestive of its beauty, especially in the adaptation of the embodiment to the theme

THE BROKEN OAR.

Once upon Iceland's solitary strand
A poet wandered with his book and pen,
Seeking some final word, some sweet Amen,
Wherewith to close the volume in his hand.
The billows rolled and plunged upon the sand,
The circling sea-gull swept beyond his ken,
And from the parting cloud-rack now and then
Flashed the red sunset over sea and land.
Then by the billows at his feet was tossed
A broken oar; and carved thereon he read,
"Oft was I weary when I toiled at thee;"
And like a man who findeth what was lost,
He wrote the words, then lifted up his head
And flung his useless pen into the sea.

—H. W. Longfellow.

The theme of the poem is, as I take it, death. Yet it is not death thought of as death, but as the closing of a life. It is *an ideal closing of a life*. The closing thought, "Oft was I weary when I toiled at thee," flashes the entire

life before us, and the theme can as well be stated, *the closing of an ideal life*. In following through the feeling of the poem, the life and its close can not be separated. Only an ideal life can permit its last sentence to express approval of the struggle by saying, "Oft was I weary," or, "I have fought a good fight."

The imagery pushes out the theme in a flash-light picture. The life is flashed before us. This gives beauty to the poem, through adaptation, for death itself is a flash, in which is summed up the whole of the struggle; the evidence reviewed, the judgment made, and the verdict rendered. In place we have a cold, bleak, ice-bound coast, dreary, dark, desolate. Nothing in it is inviting. On the shore is a desert waste of sand. On the sea the dark waves are roaring, moaning, plunging; they furiously lash the shore. Above, the black clouds rush together as in deadly strife, while now and then, between the racks, flashes a gleam of light, which leaves the scene the darker and more awful.

This furnishes a picture in ideal harmony with death as we are used to think of it. With us death is a dark and stormy entrance into an untried futurity. We fear to let go this life and enter into the beyond. But the opposite is true in this case. Here the thought is not of the future. The future is another volume and can not receive attention until the present one is finished. It takes all the time of this life for him to live this life; that spent otherwise is lost not only to time, but to eternity. He has no time, even, to contemplate death itself. His last thought is an ideal thought of an ideal life. He is in no wise affected by the warring elements about him. If he were conscious of them he could still defy them as Prometheus did Jove. But he is not. He is too busily engaged with his volume to be affected by anything that will not further it. Nothing can disturb him in the crowning act, the summing up of the book of life. Of all things the broken oar, ordinarily a type of a broken life, furnished the statement typical of the whole volume just closing. When all things point to darkness and death, the poet is conscious only of life. This is ideal, and gives beauty to the poem.

MISCELLANY.

INDIANA STATE TEACHERS' ASSOCIATION.

[*The Forty-Third Annual Meeting of the Indiana State Teachers' Association will be held in Plymouth Church, Indianapolis, Indiana, December 29-30-31, 1896.*]

PROGRAM.

TUESDAY, DECEMBER 29, 1896. EVENING SESSION, 7:30 O'CLOCK.

1. Music.
2. Devotional Exercises.—Rev. T. I. Coultas, Pastor Roberts Park M. E. Church.
3. Address of Retiring President.—Howard Sandison, Vice-President State Normal School.

4. INAUGURAL ADDRESS.—President Jas. F. Scull, Superintendent Rochester Schools.
5. Music. 6. "Closer Supervision of County Schools."—Mrs. Sarah E. Tarney-Campbell, Assistant Superintendent Anderson Schools.
7. Appointment of Committees. 8. Miscellaneous Business.

WEDNESDAY, DECEMBER 30, 1896. MORNING SESSION, 9 O'CLOCK.

1. Music. 2. Devotional Exercises.—Rev. M. L. Haines, Pastor First Presbyterian Church.
3. Symposium.—Subject: "Child Study." First Paper—"The Curve of Educational Advancement of School Children," Supt. Noble Harter, Brookville. Second Paper—"Effects of Physiological Changes on Children's Abilities," John M. Culver, Indianapolis Manual Training School. Third Paper—"Encouragements Found in Child Study," Mrs. A. R. Hornbrook, Evansville. Fourth Paper—"How Can Child Study be Made Most Useful to the Public School Teacher?" Dr. W. L. Bryan, Vice-President Indiana State University. General Discussion
4. Recess. 5. Music. 6. "Nature Study in Elementary Schools."—Supt. W. P. Shannon, Greensburg. Discussion opened by Supt. R. Ellsworth Call, Lawrenceburg.

- EVENING SESSION, 7:30 O'CLOCK.—1. Music. 2. ANNUAL ADDRESS.
3. Reception given by the Denison Hotel to the members of the Association.

THURSDAY, DECEMBER 31, 1896. MORNING SESSION, 9 O'CLOCK.

1. Music. 2. Devotional Exercises.—Rev. G. A. Carstensen, Rector St. Paul's Episcopal Church.
3. "The Teacher's Personal Influence as a Factor in Education."—Miss Mary Doane, Purdue University. Discussion opened by R. A. Ogg, Superintendent, Greencastle.
4. "The Teacher's Preparation."—Miss Marie Dunlap, Lebanon High School. Discussion by J. N. Scholl, Superintendent Milton Schools.
5. Recess. 6. Music.
7. "The New Geography."—Chas. R. Dryer, State Normal, Terre Haute.
8. Reports of Committees. 9. Miscellaneous Business. 10. Adjournment.

All papers, excepting those constituting the symposium, will be limited strictly to thirty minutes; those who open the discussions will be granted ten minutes each, while those who take part in general discussions will consume not more than five minutes each. The papers in the symposium will be allowed twenty minutes each. The music numbers on the general program are provided by Mr. W. E. M. Browne, Chairman of the executive committee of the Music Section.

RATES over railroads will be one and one-third fare, as usual, *to all who secure certificates of local agent before starting.*

HEADQUARTERS will be at the Denison Hotel. Rate, \$2.00 per day.

BADGES.—If each delegate to the State Teachers' Association will wear a plain ribbon badge bearing the name of the city, town or county in which he is teaching, it is believed that the social enjoyment of the meeting will thereby be greatly enhanced. It is certainly desired that this simple and very appropriate method of self-introduction be universally observed.

W. A. HESTER, Chairman Ex. Com.

J. F. SCULL, President.

HIGH SCHOOL SECTION.

[*Plymouth Church Auditorium.*]

WEDNESDAY, DECEMBER 30. 1:30 P. M.

- I. Papers—1. "Matter and Method in the Teaching of Physics," Wilbur A. Fisk, Richmond High School. Discussion opened by Oscar R. Baker, Superintendent, Winchester.
2. "Language Study as an Auxiliary to English Literature," Miss Kittie Palmer, Franklin High School.
- II. Symposium.—1. "Discipline in the High school," Russell Bedgood, Principal Lafayette High School. 2. "Psychology in the High School," J. W. Hamilton, Superintendent, Monticello. 3. "How to Make the High School Popular," C. M. Hamilton, Madison. 4. "Relation of History to Civil Government in the High School," C. T. Lane, Principal Ft. Wayne High School. 5. Miscellaneous Business.
President, Miss Martha Ridpath, Greencastle; Vice-President, B. B. Berry, Fowler; Secretary, Miss Annette Ferris, Thorntown; Chairman Executive Committee, D. R. Ellabarger, Richmond.

ENGLISH SECTION.

[*Plymouth Church Auditorium.*]

THURSDAY, DECEMBER 31, 1:30 P. M.

1. "The Twofold Purpose in Teaching English," Miss Adelaide Baylor, Principal Wabash High School. Discussion opened by Prof. Elmer E. Griffith, of Indiana University.
2. "A Plea for Uniformity in the Criticism of Compositions," Mrs. Angeline P. Carey, Teacher of English in the Indianapolis High School. Discussion opened by Prof. Sanford Bell, of the Valparaiso Normal School.
3. "The Teaching of Literature Once More," Prof. W. N. Trueblood, of Earlham College. Discussion opened by Miss Flora Bridges, Professor of English Literature in Butler College.
4. Business: Reports of Committees, Election of Officers.
President, Prof. G. W. Hufford, Indianapolis; Vice-President, Prof. A. B. Milford, Wabash College; Secretary, Miss Clara Mering.

MATHEMATICAL SECTION.

[*Room 122, State House.*]

WEDNESDAY, DECEMBER 30. 9 A. M.

1. "The Binomial Theorem and Convergence," Prof. M. C. Stevens, Purdue University. General Discussion.

2. "The Teaching of Algebra in High Schools," Miss Kate Wentz, Industrial Training School, Indianapolis. General Discussion.
3. "Evolution in Arithmetic," Prof. R. L. Sackett, Earlham College.

NOTE.—This paper will advocate the idea that arithmetical involution and evolution should follow algebraic involution and evolution and be presented by the methods developed in the latter.

General Discussion.

4. Discussion of Future Plan for Conducting the Mathematical Section.
All are invited to think the above subjects over with a purpose to join in the discussions.

President, Prof. Doane Studely, Wabash College; Vice-President, Miss Adelaide Baylor, Wabash; Secretary, Miss Amelia W. Platter, Indianapolis; Chairman Executive Committee, W. P. Morgan, Terre Haute.

MUSIC SECTION.

[Room 120, State House.]

WEDNESDAY, DECEMBER 30. 1:30 P. M.

To make this meeting as helpful as possible to those who attend, all are requested to prepare some practical observations or suggestions on the following topics:

1. What is Expected of the Child in Music on Entering High School?
2. How Interest the Pupils who Start in Behind Their Class?
3. Double Rooms in Graded Schools—How Taught?
4. Mid-term Promotions—How Can Supervisors Overcome the Consequent Confusion?
5. Music in the Country Schools—How Can it be Made More General?
6. Reports From the Field. 7. Election of Officers.

Discussions should be written, that they may be filed for future reference. Two sessions of the section will be held if the interest so demands. A piano is furnished for use during the meetings of the section.

President, H. E. Owen, Terre Haute; Vice-President, R. S. Moore, North Vernon; Secretary, Miss Laura E. Jennings, Lawrenceburg; Chairman Executive Committee, W. E. M. Browne, Knightstown.

INDIANA COLLEGE ASSOCIATION.

[Denison Hotel Parlors.]

TUESDAY, DECEMBER 29. MORNING SESSION, 11 O'CLOCK.

1. Reports, appointments of committees, and general business.
2. Paper—"The Bible as Literature in a College Course," Prof. Elbert Russell, Earlham College. Discussion opened by President W. W. Parsons, Indiana State Normal.

AFTERNOON SESSION, 2:30 O'CLOCK.—Conference with High School and English Sections.

Subject of Discussion.

Leaders in the discussion.

- EVENING SESSION, 8 O'CLOCK.—1. President's Address, President Scot Butler, Butler College.
2. Paper—"Some Problems in College Government," President L. J. Aldrich, Union Christian College. Discussion opened by President Joseph Swain, Indiana University.

WEDNESDAY, DECEMBER 30. MORNING SESSION, 9 O'CLOCK.

1. Paper—"The Place of Analytical Chemistry in a College Course," Prof. W. B. Johnson, Franklin College. Discussion opened by Prof. P. S. Baker, DePauw University.
2. Paper—"The Economic Side of History," Prof. P. H. K. McComb, Hanover College. Discussion opened by Prof. Melville M. Clapp, Hartsville College.
3. Paper—"Co-education: Its Possibilities and Dangers," Madam Pauline Mariotte Davies, Purdue University.
4. Reports of committees. Election of officers. Unfinished business. Adjournment.

President, Scot Butler, Butler; Vice-President, L. J. Aldrich, Union Christian; Secretary, A. S. Hathaway, Terre Haute; Treasurer, W. E. Henry, Franklin.

INDIANA ACADEMY OF SCIENCE.

[*Agricultural Halls, Rooms 11 and 12, State House.*]

TUESDAY, DECEMBER 29.

Meeting of Executive Committee, 8 p. m.

WEDNESDAY, DECEMBER 30.

General session, 9 a. m. Sectional meetings, 2 p. m. President's address, 7 p. m.

THURSDAY, DECEMBER 31.

General session, 9 a. m. General session, 2 p. m.

President, Stanley Coulter, LaFayette; Vice-President, Thomas Gray, Terre Haute; Secretary, John S. Wright, Indianapolis; Assistant Secretary, A. J. Bigney, Moore's Hill. Treasurer, W. P. Shannon, Greensburg.

COUNTY SUPERINTENDENTS' ASSOCIATION.

[*Supreme Court Room, State House.*]

TUESDAY, DECEMBER 29. MORNING SESSION, 9 O'CLOCK.

An original poem—W. W. Pfrimmer, Newton county.

Paper—"Should We Have Closer Supervision for the Country Schools?" M. U. Johnson, Madison county. Discussion led by J. A. Greenstreet, Henry county; W. B. Flick, Marion county; Orville Apple, Orange county.

AFTERNOON SESSION, 1:30 O'CLOCK.—Paper—"Should Township Trustees Furnish High School Privileges to the Graduates of the District Schools?" E. G. Machan, Lagrange county. Discussion led by E. L. Hendricks, Johnson county; J. H. McGuire, Jennings county; C. F. McIntosh, Owen county.

WEDNESDAY, DECEMBER 30. AFTERNOON SESSION, 1:30 O'CLOCK.

Paper—"How Can We Make the Meetings of the County Board of Education More Helpful?" George C. Tyrrell, Ripley county. Discussion led by C. M. Merica, DeKalb county; W. E. Wineburg, Wayne county; Frank E. Cooper, Lake county.

Miscellaneous business.

President. George R. Wilson, Dubois county; First Vice-President, L. A. Sailor, Warren county; Second Vice-President, G. N. Naber, Whitley county; Treasurer, M. U. Johnson, Madison county; Secretary, I. O. Harrison, Rush county; Assistant Secretary, J. D. Hostetter, Hendricks county.

INDIANA LIBRARY ASSOCIATION.

The Library Association will hold a Library Institute December 29 to 31, 1896, in the Assembly Room of the Indianapolis Public Library. Miss E. Cornelia Marvin, of the Department of Library Science of Armour Institute, Chicago, has been engaged to give a series of lectures on modern library methods, including ordering and accessioning, mechanical preparation of books, classification, cataloguing, charging systems, and reference work. There will be, also, practical discussions of local library problems. Mr. A. V. Babine, of the State University Library, will deliver an address on the problems and possibilities of a college library. It is hoped to have an entertaining lecture on some pertinent topic on one evening, and the usual social gathering will be enjoyed on the other evening. All librarians, assistants, trustees, and school people interested are urged to be present. The work of the new library section of the National Educational Association will be presented by Miss N. Ahern, secretary of the department. The importance of coöperative work between schools and libraries is everywhere attracting the deepest interest, and it is hoped that Indiana schools and libraries will be among the first to formulate successful plans for future work.

Mr. Rutherford B. Hayes, Library Commissioner of Ohio and Secretary of the American Library Association, will be present at this meeting. A pleasant and profitable meeting is assured to all who attend.

ASSOCIATION OF READING AND ELOCUTION.

[*Supreme Court Room, State House.*]

THURSDAY, DECEMBER 31. MORNING SESSION, 10 O'CLOCK.

1. "Reading in the High School," Miss Bertha Frances Wolfe, Jeffersonville High School. General discussion.
2. "Gesture and Its Limitations," T. J. McAvoy, Indianapolis School of Oratory. General discussion.

AFTERNOON SESSION, 2 O'CLOCK.—1. "The Literary Phase of Reading,"

Miss Emma Z. Craig, Garfield School, Richmond. General discussion.

2. Readings from "Midsummer Night's Dream," Miss Elizabeth Johnston, Marion. 3. Miscellaneous business.

President, A. R. Priest, Greencastle; Vice-President, Mrs. M. V. Hamilton, Indianapolis; Secretary and Treasurer, C. M. Geerish, LaFayette.

CLASSICAL SECTION.

[Room 122, State House.]

THURSDAY, DECEMBER 31, 9 A. M.

1. Report of Secretary and Treasurer. 2. Appointment of Committees.
3. Paper—"Latin as a Pure Science," Miss Cora Bennett, Marion High School. Discussion opened by Demarchus C. Brown, Indianapolis University.
4. Paper—"Latin in Our Schools from a High School Teacher's Stand-Point," Miss Bettie C. Grimsley, Principal Lebanon High School. Discussion led by R. H. Richards, Superintendent Spencer Schools.
5. Paper—"The Three Years' Course in Latin in Our High Schools," H. W. Johnson, Indiana State University. Discussion led by H. M. Kingery, Wabash College.
6. General Discussion of Papers. 7. Reports of Committees.
8. Miscellaneous Business. 9. Adjournment.

President, A. J. Dotey, Indianapolis; Vice-President, H. A. Hoffman, Bloomington; Secretary and Treasurer, Miss Cora Bennett, Marion.

CONFERENCE OF PRIMARY TEACHERS.

[Plymouth Church, Lecture Room.]

WEDNESDAY, DECEMBER 30. 1:30 P. M.

One of the most interesting features of this week's meetings will be the Conference of Primary Teachers of the State to be held in the spacious upper room at Plymouth church. It will be under the direction of Mrs. Sarah Tarney-Campbell, assistant superintendent of the Anderson schools. The mere reading of this meeting will not be sufficient. To catch the helpful spirit that will undoubtedly characterize its deliberations, teachers must be present.

INDIANA CHILD STUDY ASSOCIATION.

[Plymouth Church Auditorium.]

THURSDAY, DECEMBER 31. 1:30 P. M.

It is proposed to organize, at the time and place above noted, a State Child Study Association. The announcement of this movement will be received with enthusiastic approval by progressive teachers throughout the State. Prof. W. L. Bryan, of the State University, will act as chairman of the meeting and direct in the organization of the new association. It is safe to say that an epoch in the history of education in Indiana will date from the organization of this association.

TOWN AND CITY SUPERINTENDENTS' MEETING.

The seventh annual meeting of town and city superintendents met in Indianapolis November 12, 1896.

Prayer was offered by Superintendent Ogg, of Greencastle.

President Carnagey made some well-chosen points upon the importance of the matters before the association, asked the coöperation of all present in getting full value from all discussions, and called the program.

Superintendent Ogg, for the Committee on Course of Study, reported that alterations and amendments had not been offered, and gave to the association the Course of Study as it was at the adjournment of the last meeting. Discussion immediately began, Superintendent Tomlin, of Shelbyville, leading by challenging the use of "fairy stories" in primary schools.

The discussion became general, and, having occupied all available time, was stopped until the morning session should convene.

On motion of Superintendent Almond, a committee to prepare resolutions upon the deaths of the late Superintendents J. R. Starkey of Martinsville, Susan G. Patterson of Union City, and J. W. Layne of Evansville, was appointed by the chair. The committee was composed of Almond of Delphi, Hershman of New Albany, Baker of Winchester, Kerlin of Martinsville, and Burris, of Bluffton.

On motion of Superintendent Ogg, a vote of appreciation and thanks was offered State Superintendent Geeting for his assistance to the association in the printing and distribution of the Course of Study.

Friday Morning.—After full discussion, the following resolutions were adopted. [1] By Superintendent Moore :

Be it Resolved, That this body looks upon the Course of Study as submitted by our committee as a substantial advance in the work of education in this State ; and that after a year's examination and trial we re-indorse our approval expressed a year ago. [2] By Superintendent Woody :

Be it Resolved, That we regard the Course of Study as outlined by our committee as a substantial advance in the educational thought and work of the State, and that after a year's trial and examination we re-indorse our action of approving it one year ago. And

WHEREAS, A great deal of study may profitably be put upon every phase of this course of study ; therefore,

Be it Resolved, That this association appoint a committee of forty to make a special study of the Course, to revise and amplify it, and report the results of their labor in full at the meeting of November, 1897 ; said work and committee to be divided as follows: The course to be divided [1] longitudinally in five groups, corresponding to Dr. W. T. Harris's five-unit bases for the course ; [2] by cross-section into eight groups corresponding to the eight years in the course ; the committee to be divided into [1] five sub-committees of eight and [2] into eight sub-committees of five each, to correspond with the foregoing divisions of the course. The chairman-elect of the association shall preside over the deliberations of the committee. This committee shall be authorized to carry out Dr. Bryan's suggestion of appointing certain primary teachers to experiment and test the educational value of fairy stories.

Dr. Bryan announced the meeting of the Child Study Congress at Bloomington, May 5, 6 and 7, 1897, and invited superintendents to be present.

State Superintendent Geeting spoke upon the meeting of the Department of Superintendence of the National Association at Indianapolis next February. On motion of Superintendent Hamilton, a Committee on Arrangements was appointed to assist Superintendent Goss. This committee was composed as follows : Superintendents Goss, Carnagey, Geeting, Ayers, and President Parsons.

The motion of Superintendent Study, that county superintendents' meeting be asked to appoint a committee to coöperate with this committee, prevailed.

Afternoon Meeting.—Superintendent Study moved that the report of the Committee on School Economy be deferred until the next meeting. Carried.

Dr. Draper was introduced and spoke upon the school system in cities.

Dr. Hurty, of the State Board of Health, spoke of the new rules governing the conduct of schools.

An election of officers for ensuing year resulted as follows :

President, W. D. Weaver, Marion.

Vice-President, W. D. Kerlin, Martinsville.

Secretary, F. M. Beard, Hartford City.

Treasurer, H. G. Woody, Kokomo.

Executive Committee :—Calvin Moon, South Bend ; F. L. Jones, Tipton ; F. F. Heighway, Crown Point ; O. C. Seelye, Laporte ; C. M. McDaniel, Madison ; W. P. Hart, Covington ; Will Featheringill, Franklin.

Committee of Forty :

READING.

A. E. Hunke, Vincennes.
F. F. Fitzgibbon, Elwood.
W. D. Kerlin, Martinsville.
E. S. Monroe, Mt. Vernon.
J. H. Tomlin, Shelbyville.
W. C. Belman, Hammond.
W. A. Millis, Attica.
J. N. Study, Ft. Wayne.

ARITHMETIC.

J. W. Carr, Anderson.
W. H. Sims, Goshen.
R. A. Chase, Plymouth.
A. H. Douglas, Logansport.
F. L. Jones, Tipton.
J. F. Scull, Rochester.
W. R. J. Stratford, Peru.
J. F. Haines, Noblesville.

GEOGRAPHY.

Will Featheringill, Franklin.
W. S. Almond, Delphi.
W. P. Hart, Covington.
W. H. Hershman, New Albany.
W. P. Shannon, Greensburg.
B. F. Moore, Frankfort.
W. R. Snyder, Muncie.
W. D. Weaver, Marion.

HISTORY.

Edward Ayres, Lafayette.
R. A. Ogg, Greencastle.
W. A. Hester, Evansville.
C. F. Patterson, Edinburg.
D. W. Thomas, Elkhart.
H. G. Woody, Kokomo.
W. H. Wiley, Terre Haute.
R. I. Hamilton, Huntington.

GRAMMAR.

W. P. Burris, Bluffton.
F. M. Beard, Hartford City.
J. W. Hamilton, Monticello.
J. H. Henry, Warsaw.
A. E. Malsbary, Thorntown.
T. A. Mott, Richmond.
C. N. Peak, Princeton.
P. V. Voris, Danville.

Friday Evening.—Dr. Draper spoke of the New York system of licensing teachers.

On motion of Mr. Ayres, Association endorsed the recommendations of superintendent Geeting to the next legislature ; asked that the State Board take charge of educational matters before the next legislature ; and also ask an increase in the state tuition tax.

The committee on resolutions reported appropriate resolution on death of J. R. Starkey, Susan G. Patterson and J. W. Layne, members who have died in the past year.

On motion, Indiana Day was adopted as a day upon which a collection should be taken up to help defray expense of a monument on Tippecanoe battle-field.

Saturday Morning was devoted to general discussion of matters of school interest. Superintendent Tomlin led discussion of topic, "Teachers' Meetings," and Mrs. Campbell led upon the topic, "More Work in Primary Grades."

On motion, a conference of primary teachers with Mrs. Campbell as leader was arranged to be held during the State meeting in December.

Superintendent Moore moved that "the sentiment of this association is for increased facilities for professional training." Carried.

Superintendent Ogg moved that a committee composed, of W. A. Bell, Superintendent Carnagey, and Superintendent Stratford, petition the next Legislature to pass a "curfew law." Superintendent Carr amended to include raising the "age of consent" from fourteen to sixteen years. Unanimously carried.

Superintendent Carr moved that "the sense of this association favors compulsory education." Unanimously adopted. Adjourned.

W. R. STRATFORD, Secretary.

J. A. CARNAGEY, President.

DID YOU forget to pay for the JOURNAL at county association as you agreed to? If you did, you can make it all right with the editor by remitting to him at once.

CIGARETTE SMOKING has been prohibited by ordinance to boys in Anderson, Muncie, Lebanon, Knightstown, Clinton, and possibly other cities. *Good.*

WEST INDIANAPOLIS has just opened a new public library of 1,409 well selected books. The school board and the school superintendent Andrew Martin, deserve much credit for this good move.

NORTH JUDSON recently dedicated a fine modern eight-room school house. County Supt. W. B. Sinclair made the principal address on the occasion of the dedication. C. E. Smith is principal of the schools.

HOPE NORMAL SCHOOL reports an advance on last year in point of attendance and in efficiency in work. Graduates from its special course are admitted to the freshman class at Indiana University without examination. Geo. W. Thompson is principal of the normal department.

THE NATIONAL EDUCATIONAL ASSOCIATION will hold its next meeting in Milwaukee. The executive committee after visiting Detroit, Minneapolis, and Milwaukee, unanimously decided to go to the last named place. The "Proceedings" of the Buffalo meeting are promised by December 15.

PURDUE UNIVERSITY offers to do some work along the line of University Extension. Different members of its faculty offer to go out and lecture to schools and general audiences at a small charge above expenses. Send for circular giving subjects, etc. Address the president, James H. Smart, LaFayette.

VIGO COUNTY, the only county in the state that employs a special teacher of Music for the district schools, has issued outlines giving directions for the progressive study of this branch. Music has a place on the program for township institute work. H. E. Owen is the superintendent of Music. H. W. Curry is county superintendent.

GAS CITY is only four or five years old, but at present employs eleven teachers, with W. O. Warrick as superintendent. The superintendent reports the schools in good order and working along improved lines. The superintendent and three of his teachers spent most of the summer in the Cook county normal school and feel much benefited by what they received. The State Board has recently commissioned the high school of this place. The first graduating class will number seven.

PURDUE UNIVERSITY proposes to offer to the farmers a "Winter Course in Agriculture" to begin Jan. 4, and continue eleven weeks. This will give time in which to do some good thorough work and get great benefit and then return to the farm in time for the spring work. Hundreds of enterprising young farmers ought to embrace this opportunity. Purdue is one of the best institutions of its class in this country and is doing a great work for Indiana. Send to Prof. W. C. Latta for circulars giving full particulars.

THE INDIANA REFORM SCHOOL at Plainfield is doing a great work under the superintendency of T. J. Charlton. It is probable that Prof. Charlton is the best man in the state for the place he holds. Nearly 5,000 boys have at various times been inmates of this school, and the record shows that about 80 per cent. of those who have gone out have become good citizens. The boys attend school one-half the day and work the other half, so that when they leave they have a respectable education and know how to earn a living.

THE NEWTON COUNTY INSTITUTE was held in Goodland, beginning November 9. The teachers of the county seem to prefer this time for holding their institute. The principal instructors were Dr. T. J. Bassett for the entire week, Pres. Parsons the first part and Mrs. McRae the last part of the week. W. A. Bell was present one day and lent some assistance. This was Dr. Bassett's second year and his work was as much appreciated as ever. Supt. Pfrimmer requires all his teachers to take notes of what they hear, and then some time is taken at the opening of each session in listening to the reading of these notes by different teachers. At the close of the institute these note books are left with the Superintendent for inspection. The teachers of Newton compare favorably with the teachers of other counties, in professional training and general intelligence.

INDIANAPOLIS SCHOOL No. 8, Miss Georgia Alexander, principal.—This school does only grammar grade work. A recent visit found this school in superior working condition. A special feature needs mention as it may be suggestive to others. A systematic effort is being made to give the boys and girls a general knowledge of early Egyptian civilization. To this end an outline of work is made which is followed by all the teachers. Once in two weeks the schools are all assembled and a review is made by the principal. These reviews are illustrated by the stereopticon. The writer witnessed "A Trip Up the Nile", and was delighted with views of pyramids, temples, columns, statues, porticos, ruins, rapids, etc. Each picture was described by some pupil specially prepared, the principal making any needed explanations. The hour was profitably and delightfully spent.

STEBEN COUNTY INSTITUTE was held the week beginning November 9. This county has opened its institute on the second Monday in November for many years. This is one of the few counties in the state that can support a lecture every night in the week and furnish a good audience every night. Two of the lectures were *pay* lectures and these were the best attended. The good people of Angola deserve much credit for their loyalty to the teachers' institutes. The regular instructors were W. W. Black of Champaign, Illinois, and Mrs. E. E. Olcott, and they both did excellent work. This was Mrs. Olcott's second year. W. A. Bell was present two days and rendered acceptable assistance. This was the thirty-second institute held in the county and R. V. Carlin the present superintendent has held *sixteen* of them. Not more than one or two other superintendents have served so long, and no one has served more faithfully. He seats his teachers in the institute by townships, and calls the roll by townships. This method serves several good purposes: [1] It saves time, for one person answers for his township; [2] it causes a healthy rivalry among the townships. Each wants to get 100 per cent.

PERSONAL.

E. BRADNER directs school matters at Hudson.

H. G. BROWN is school principal at Pleasant Lake.

C. K. McCALLY is principal of the Fremont schools.

W. L. KELLENBERGER is serving his fourth year at Brook.

E. McFARLAND is superintendent of the schools at Loogootee.

MISS KITTY PFRIMMER is principal of the schools at Morocco.

G. B. COFFMAN continues in charge of the Mooresville schools.

J. C. DICKERSON continues to superintend the Goodland schools.

J. P. PORTER continues as principal of the Kentland High School.

A. J. COLLINS is serving his fourth year as principal of the Orland schools.

THOS. P. FRENCH and three assistants keep the schools going at Hamilton.

F. W. RAUCH has charge of the business department of Fairmount Academy.

J. W. JAY, superintendent of the Fortville schools, has sent out a circular letter to parents in which he gives some good advice and makes some excellent suggestions.

E. H. DRAKE is doing his second year's work as superintendent at Kentland.

HERMAN GARRISON is serving his third year as principal of the Goodland High School.

J. C. GREGG is serving his eighteenth year as superintendent of the Brazil schools.

J. W. WYANDT continues in charge of the Angola schools. Angola employs nine teachers.

W. E. ALEXANDER is superintendent of the schools at Bedford. He was last year at Converse.

GEO. W. THOMPSON, principal of the Hope normal school, recently paid the JOURNAL office a pleasant visit.

PROF. D. W. DENNIS, of Earlham College, recently spent two days in Indianapolis attending the university extension course conference.

W. D. WEAVER, superintendent of the Marion schools, was elected President of the State Convention of Town and City Superintendents.

J. L. DIXON, principal of the West Indianapolis High School, was recently called to his family, who still live in Bartholomew county, on account of serious illness.

HON. ANDREW S. DRAPER, President of the University of Illinois, made two excellent addresses before the State Convention of Town and City Superintendents, held at Indianapolis.

MRS. EMMA MONT. MCRAE of Purdue University, one of the most popular institute instructors in the state, has a great many calls during the year for every lecture. She always makes an address worth hearing.

SIDNEY C. HUFFMAN, formerly a teacher in Steuben county, is now principal of the schools at Boyden, Iowa. His wife [*née* Eva Harpham], last year a teacher in the Pleasant Lake schools, is teaching with him.

PROF. L. W. FAIRFIELD, of the Tri-State Normal, at Angola, did some very acceptable work in the Marshall County Association, held at Plymouth, November 27 and 28. Prof. Fairfield is a good thinker and a good speaker.

E. B. BRYAN, well known as an institute instructor, was formerly connected with the Indianapolis High School, but is now holding the chair of literature in Butler College. He has recently moved to Irvington so as to be near his work.

F. O. STOKOE, a graduate of Albion College, Mich. and of the Northern Indiana Normal, is the new teacher in the Hope normal school and takes the place vacated by J. L. Dixon. He is scholarly and is reported an "excellent teacher."

J. H. SOUTHER, of Mays, Rush county, has been a faithful teacher for eleven years, but on account of ill health is compelled to resign his place and abandon his chosen work. It is hoped that he may regain his health and be able to resume his profession.

MRS. LOIS G. HUFFORD, teacher of literature in the Indianapolis High School, recently read a paper at a "convocation" in Chicago University, on "The Relation of Other Branches to English." The JOURNAL hopes to give its readers the privilege of reading this paper.

DR. DAVID S. JORDAN, formerly President of Indiana University, but now President of Leland Stanford University, California, recently paid a visit to his old Indiana home. He lectured at Bloomington and Indianapolis. He was on his way to Washington, D. C., to make a report of the results of his Alaskan expedition last summer. The doctor is looking well, and had reason to feel gratified at the cordiality with which his Hoosier friends received him.

W. W. BLACK, now doing work in the Illinois State University at Champaign, has grown to be one of the most popular institute workers in this State. He follows the general lines of thought pursued by Arnold Tompkins, and is a disciple of whom the master may well be proud.

THOMAS CHARLES, an old Indiana teacher, but for many years past a dealer in kindergarten supplies in Chicago, recently paid the JOURNAL office a pleasant visit. Any one needing kindergarten or primary supplies and helps should write Mr. Charles, at 211 Wabash avenue, Chicago.

J. W. BROWNING, one of the leading teachers of Jackson county and for many years agent for the SCHOOL JOURNAL, died of consumption October 30. Mr. Browning was a man of high character, whom to know was to respect. He was a teacher whose character could be safely copied by his pupils. It will not be easy to fill his place in the community in which he lived.

CHAS. B. GILBERT, for several years past superintendent of the schools of St. Paul, Minn., has recently resigned to accept the superintendency at Newark, N. J. Mr. Gilbert ranks high among superintendents, as indicated in the fact that he is president-elect of the National Superintendents' convention, which will hold its next annual meeting in Indianapolis next February.

JOHN M. BLOSS, formerly Superintendent of Public Instruction in this State, but for some years past President of the Oregon State Agricultural College, has returned to Indiana to remain. He has become State manager for the Mutual Reserve Fund Life Association, with headquarters at Muncie, his old home. He represents a good company, and his friends will join in wishing him large success.

BOOK TABLE.

CHATTERBOX FOR 1896.—The only genuine Chatterbox, containing a great variety of original stories, sketches and poems for the young. All the illustrations contained in it are expressly designed for it by eminent English artists. This, the acknowledged king of all juvenile books, is fully up to its standard of excellence this year. It is eagerly looked forward to by thousands of young people as the holiday season approaches. It contains over 400 pages and 200 original illustrations by English artists, and is not only a most interesting, but a very instructive book. Six handsomely colored plates will be added to the volume this year. Small 4to, illuminated board covers, \$1.25. Same, handsomely bound in cloth, full gilt, with chromo side, full gilt edges, \$1.75. Estes & Lauriat, publishers, Boston.

Exhaustion

Horsford's Acid Phosphate

Overworked men and women, the nervous, weak and debilitated, will find in the Acid Phosphate a most agreeable, grateful and harmless stimulant, giving renewed strength and vigor to the entire system.

Dr. Edw n F. Vose, Portland Me., says: "I have used it in my own case when suffering from nervous exhaustion, with gratifying results. I have prescribed it for man of the various forms of nervous debility, and it has never failed to do good."

Descriptive pamphlet free. Rumford Chemical Works, Providence, R. I. Beware of substitutes and imitations. For sale by all Druggists. 7-tf

INDIANA SCHOOL JOURNAL.

BUSINESS NOTICES.

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TEACHERS.—Qualified teachers assisted to good positions anywhere in the U. S. at half usual rates. Schools supplied with competent teachers without cost. Services honest and efficient. Endorsed by leading educators. W. T. PARKS, Manager Equitable Teachers' Bureau, Charles Bldg., Denver, Colorado. 11-21

SCHOOL BOARDS contemplating changes can learn the address of the best Western and Eastern teachers, willing to change places, by addressing Orville Brewer, manager of the Teachers' Co-operative Association, 101 Auditorium Bldg., Chicago. We can assure all who write of confidence and honorable treatment. 2-tf

DO YOU TEACH WRITING?—100 common-sense lessons in writing and how to give them. Fully illustrated. Every lesson thoroughly outlined. Lesson 28, illustrated. Position, slant, movement, elements, principles, figures, movement exercises and letters taken up in logical order. It helps the copy book. Price 25 cts. Address, J. H. BACHTENKIRCHER, Lafayette, Ind., special teacher of writing, Lafayette public schools. 11-31.

A CHOICE CHRISTMAS GIFT.—In the selection of a choice Christmas gift, or an addition to one's own library, both elegance and usefulness will be found combined in Webster's International Dictionary, which is the last of the various revisions and enlargements of the original "Webster." The International represents fifty times the amount of literary labor that was expended upon the earliest edition, and is, without question, the most complete and reliable work of the kind ever published in a single volume. It is warmly indorsed by eminent scholars throughout the English-speaking world, and is a most useful book for the library, the school, the family, the student, and in fact for all who read or write the English language.



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